

MEDICAL REPORTS

FOR THE

HALF YEAR ENDED 31ST MARCH 1874;

FORWARDED BY THE SURGEONS TO THE CUSTOMS AT THE
TREATY PORTS IN CHINA;

BEING No. 7 OF THE SERIES,

AND

FORMING THE SIXTH PART OF THE

CUSTOMS GAZETTE

FOR

JANUARY-MARCH, 1874.

PUBLISHED BY ORDER OF

The Inspector General of Customs.

SHANGHAI:

IMPERIAL MARITIME CUSTOMS STATISTICAL DEPARTMENT.

MDCCCLXXV.

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CUSTOMS

JANUARY-MARCH 1975

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INSPECTOR GENERAL'S Circular No. 19 of 1870.

INSPECTORATE GENERAL OF CUSTOMS,

PEKING, 31st December, 1870.

SIR,

1.—It has been suggested to me that it would be well to take advantage of the circumstances in which the Customs Establishment is placed, to procure information with regard to disease amongst foreigners and natives in China; and I have, in consequence, come to the resolution of publishing half-yearly in collected form all that may be obtainable. If carried out to the extent hoped for, the scheme may prove highly useful to the medical profession both in China and at home, and to the public generally. I therefore look with confidence to the co-operation of the Customs Medical Officer at your port, and rely on his assisting me in this matter by framing a half-yearly report containing the result of his observations at.....upon the local peculiarities of disease, and upon diseases rarely or never encountered out of China. The facts brought forward and the opinions expressed will be arranged and published either with or without the name of the physician responsible for them, just as he may desire.

2.—The suggestions of the Customs Medical Officers at the various ports as to the points which it would be well to have especially elucidated, will be of great value in the framing of a form which will save trouble to those members of the Medical profession, whether connected with the Customs or not, who will join in carrying out the plan proposed. Meanwhile I would particularly invite attention to—

a.—The general health of.....during the period reported on; the death rate amongst foreigners; and, as far as possible, a classification of the causes of death.

b.—Diseases prevalent at.....

c.—General type of disease; peculiarities and complications encountered; special treatment demanded.

d.—Relation of disease to { Season.
Alteration in local conditions—such as drainage, &c.
Alteration in climatic conditions.

e.—Peculiar diseases; especially leprosy.

f.—Epidemics { Absence or presence.
Causes.
Course and treatment.
Fatality.

Other points, of a general or special kind, will naturally suggest themselves to medical men; what I have above called attention to, will serve to fix the general scope of the undertaking. I have committed to Dr. ALEX. JAMIESON, of Shanghai, the charge of arranging the reports for publication, so that they may be made available in a convenient form.

3.—Considering the number of places at which the Customs Inspectorate has established offices, the thousands of miles north and south and east and west over which these offices are scattered, the varieties of climate, and the peculiar conditions to which, under such different circumstances, life and health are subjected, I believe the Inspectorate, aided by its Medical Officers, can do good service in the general interest in the direction indicated; and, as already stated, I rely with confidence on the support and assistance of the

Medical Officer at each port in the furtherance and perfecting of this scheme. You will hand a copy of this Circular to Dr....., and request him, in my name, to hand to you in future, for transmission to myself, half-yearly reports of the kind required, for the half-years ending 31st March and 30th September—that is, for the Winter and Summer seasons.

4.—

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*

*

I am, &c.,

(signed)

ROBERT HART,

I. G.

THE COMMISSIONERS OF CUSTOMS.—*Newchwang, Ningpo,*
Tientsin, Foochow,
Chefoo, Amoy,
Hankow, Tamsui,
Kiukiang, Takow,
Chinkiang, Swatow, and
Shanghai, Canton.

SHANGHAI, 1st February, 1875.

SIR,

IN accordance with the directions of your despatch No. 6 A (Returns Series) of the 24th June 1871, I now forward to the Statistical Department of the Inspectorate General of Customs the following documents:—

A.—Report on the Health of Foochow (Pagoda Anchorage), for the half year ended 31st March, 1874, pp. 7-17;

B.—Report on the Health of Chefoo, for the year 1873, pp. 18-22;

C.—Report on the Health of Tamsui, p. 23,

D.—Report on the Health of Ningpo, pp. 24, 25; each of these two Reports relating to the year ended 31st March, 1874;

E.—Report on the Health of Amoy, pp. 26-32,

F.—Report on the Health of Shanghai, pp. 33-44; each of these two Reports relating to the October-March half year (1873-74).

Much of the material for the next volume is now ready, and will shortly be handed to the Statistical Department for publication.

I have the honour to be,

SIR,

Your obedient Servant,

R. ALEX. JAMIESON.

THE INSPECTOR GENERAL OF CUSTOMS,

Peking.

The Contributors to this Volume are—

| | |
|--|----------------------------|
| J. R. SOMERVILLE, M.D., F.R.C.S.E., | Pagoda Anchorage, Foochow. |
| W. W. MYERS, M.B., M. CH., | } Chefoo. |
| J. R. CARMICHAEL, M.D., F.R.C.S., | |
| B. S. RINGER, M.R.C.S., L.S.A., | Tamsui, Formosa. |
| J. H. MACKENZIE, M.D., | Ningpo. |
| P. MANSON, M.D., M. CH., | } Amoy. |
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| R. ALEX. JAMIESON, M.A., M.D., M.R.C.S., | Shanghai. |

A.—Dr. J. R. SOMERVILLE's Report on the Health of Foochow (Pagoda Anchorage),
for the half year ended 31st March, 1874.

I.—Physical Characters of the District.

FOOCHOW, the capital of the province of Fukien, is situated on the left (geographical) bank of the river Min, in Lat. $25^{\circ} 58' 22''$ N., and Long. $119^{\circ} 27' 40''$ E.* DOWE states the mean annual temperature as 68° F. (on theoretical grounds, I presume, for, so far as I know, the mean annual temperature of Fukien has yet to be determined). On this supposition the isothermal line passes to the south of Cabul, cuts Teheran, continues through the Mediterranean to the south of Cyprus, nearly touching Tripoli and Morocco; crosses the Atlantic to the south of Bermuda, and continues along the northern part of Florida to San Francisco.

According to the generally received classification of zones of vegetation, this district would be included in the sub-tropical.

Pagoda Anchorage is about 17 miles from the mouth of the river (at Sharp Peak), and Foochow is about 10 miles farther up. Only vessels of light draught can go up to the city, and consequently the great bulk of the shipping remains here.

From the mouth of the river to the anchorage, the scenery, though picturesque, is rather bare, from the want of large timber and undergrowth. Farther up, especially along the Yung-fu branch and on the main river to Shui-kao, the country is very beautiful, and often even grand. There, the wonderful blending of water, wood, crag and mountain reminds one now of Switzerland, now of Scotland, and again of the Rhine; while the clumps of feathery bamboos, the pointed roofs of the temples peeping through the ever-green foliage of the native banyan,† and here and there a pagoda, give to the landscape a beauty all its own.

The hills, in height from 100 to 3,000 feet, run as a rule parallel to the course of the river, leaving valleys between. The general geological structure is conglomerate. The highlands are mostly of granite, often disintegrated, and beds of laterite are common all over the country. There is, however, a fine natural drainage from the uplands into the main river, and no lodgment for collections of water. No marshes exist. The lowlands are rich alluvial plains in the highest state of cultivation, the best localities yielding two crops of rice and one of barley in the year. The valley of the Min is, indeed, one of the most fertile parts of China. It is evident, however, that such excessive cropping would in time exhaust even the richest land, were means not taken to restore the abstracted elements to the soil, and this is effected in two ways. First, every particle of manure of whatever kind is collected and preserved with the greatest care. After maturation in pits made for the purpose, it is applied to the fields in a liquid form. The other method is by removing the surface of the old soil for a foot or two and replacing it by the rich alluvial deposit from the creeks. The old soil is used to repair the embankments.

This practice of watering the fields with liquid night-soil, and the pits and buckets used in the trade, are the main sources of the celebrated odours of China.

The men (oftener women) engaged in the traffic appear smiling and robust, and, after careful inquiry, I cannot learn that they take any harm from their unsavoury occupation.

* The greater portion of the foreign settlement is on the right bank. † *Ficus religiosa*.

II.—Diseases.

NOSOLOGICAL RETURN for the six months ended 31st March, 1874.

| DISEASES. | 1873. | | | 1874. | | | TOTAL. | DIED. | REMARKS. |
|--|----------|-----------|-----------|----------|-----------|--------|--------|-------|------------------------------------|
| | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | | | |
| I.—GENERAL DISEASES. | | | | | | | | | |
| Section A:— | | | | | | | | | |
| Ague, | 2 | 1 | 1 | 1 | — | — | 5 | — | |
| Mixed Fever, | 1 | — | — | — | — | — | 1 | 1 | |
| II.—GENERAL DISEASES. | | | | | | | | | |
| Section B:— | | | | | | | | | |
| Rheumatism, | 5 | — | 2 | 2 | — | 1 | 10 | — | All chronic except 2 cases. |
| Syphilis,—Primary, | 7 | 4 | 2 | — | — | 2 | 15 | — | |
| „ —Secondary, | 6 | 1 | — | — | 1 | — | 8 | — | Imported. |
| Phthisis Pulmonalis, | 1 | — | — | — | — | — | 1 | — | |
| III.—DISEASES OF THE NERVOUS SYSTEM. | | | | | | | | | |
| Epilepsy, | 1 | — | — | — | — | — | 1 | — | |
| Temporary Mental Disturbance, | — | 1 | — | — | — | — | 1 | — | |
| Neuralgia, | — | 1 | 1 | 1 | — | — | 3 | — | |
| Ophthalmia, | — | 1 | 1 | — | — | — | 2 | — | |
| V.—DISEASES OF THE CIRCULATORY SYSTEM. | | | | | | | | | |
| Diseases of the Heart:— | | | | | | | | | |
| Organic, | 1 | — | — | — | — | — | 1 | — | |
| VII.—DISEASES OF THE RESPIRATORY SYSTEM. | | | | | | | | | |
| Catarrh, | 2 | — | 1 | — | — | 1 | 4 | — | |
| Bronchitis, | 2 | — | — | — | — | — | 2 | — | |
| Pneumonia, | 1 | — | — | — | — | — | 1 | — | |
| VIII.—DISEASES OF THE DIGESTIVE SYSTEM. | | | | | | | | | |
| Dyspepsia, | 2 | — | 1 | — | — | — | 3 | — | |
| Dysentery, | 3 | 1 | — | 1 | — | — | 5 | 1 | |
| Diarrhœa, | 7 | 3 | 4 | 1 | 5 | 2 | 22 | — | |
| Enlarged Spleen, | — | — | 1 | — | — | — | 1 | — | |
| IX. & X.—DISEASES OF THE GENERATIVE SYSTEM. | | | | | | | | | |
| Enlarged Prostate, | 1 | — | — | — | — | — | 1 | — | |
| Gonorrhœa, | 8 | 8 | 3 | 3 | — | — | 22 | — | Only 2 cases local; rest imported. |
| Paraphimosis, | — | 1 | — | — | — | — | 1 | — | |
| Spermatorrhœa, | — | — | 1 | — | — | — | 1 | — | |
| Orchitis, | — | 1 | — | — | — | — | 1 | — | |
| XI.—DISEASES OF THE LOCOMOTIVE SYSTEM. | | | | | | | | | |
| Talipes Varus, | — | — | — | — | — | 1 | 1 | — | Operated on. |
| XII. & XIII.—DISEASES OF THE CUTANEOUS SYSTEM. | | | | | | | | | |
| Ulcer, | 1 | — | 1 | — | — | — | 2 | — | |
| Urticaria, | — | — | — | — | — | 1 | 1 | — | |
| WOUNDS AND INJURIES. | | | | | | | | | |
| Wounds, | 1 | 1 | — | — | — | — | 2 | — | |
| Sprains, | 1 | 1 | — | — | — | — | 2 | — | |
| TOTAL,..... | 53 | 25 | 19 | 9 | 6 | 8 | 120 | 2 | |

Analysis of the Nosological Table.

These cases are taken from a population, including the shipping, of about 400. There were 2 deaths during the 6 months. One from malignant remittent fever, and the other from dysentery (the latter patient arriving in a dying state). The death-rate for the period in question is therefore only 5 per 1,000. In consequence of the change in the shipping from sailing vessels to large steamers, and the collapse of the coasting trade at this port, it happens that the floating population has very much diminished of late years—especially during the winter months—and the field for return is a small one.

Some of the cases are, however, deserving of notice.

(a). *Mixed Fevers, Malignant Remittent Fever.*—In the Report No. 4, pp. 58-60, I had occasion to remark on the difficulty experienced by practitioners abroad in reducing the various forms of fever met with to one or other of the recognised types, and I ventured to apply the term “mixed fevers” to one class.

I have unfortunately, again to report a case of this form which, like the four others that have occurred here within the last 11 years, terminated fatally.

T. D., aged 34, master of a British vessel, arrived at this port from Shanghai on the 2nd October, 1873. Patient came of a healthy family and had always enjoyed good health; he was also very temperate in his habits. During the first week of October he complained of symptoms of general malaise—want of appetite, feeling of languor, headache, and particularly of the passing of considerable quantities of bilious matter both by vomiting and by stool. Under treatment by nitro-muriatic acid and quinine and dieting he improved for the time; got about again, and seemed to have recovered his usual health, though still weak.

On the 16th October, fever of a remittent type set in, and continued as the ordinary remittent of this country until the morning of Tuesday, the 21st (6th day of fever), when it took on symptoms of malignancy. There was confusion of ideas on the morning of that day, and by evening the patient had passed into coma. The tongue was clean up to this date, but next day, the 22nd, it was seen to be brown and parched. At this stage, too, the pulse altered in character; from being full and strong it became feeble, and stimulants were required.

23rd, 24th, 25th.—Patient much in the same state; coma continues; he can be aroused occasionally to answer questions, but soon relapses into unconsciousness.

26th.—Sphincters relaxed, coma complete, lividity of lips, coldness of extremities, skin covered with a cold clammy perspiration. From this period the case was hopeless; subsultus tendinum and “fly-catching” set in, and patient showed a fatuous expression of countenance that was peculiarly painful to witness. Notwithstanding the administration of stimulants in enormous quantities patient sank on the morning of the 30th (15th day of the fever). There was no autopsy. The treatment comprised quinine, both in large and small doses (17 grains, given in quantities of 10 and 7 grains within 3 hours, I consider a fairly large dose) enemata, ice to head, sinapisms to feet, frictions, and the free administration of brandy, champagne, and liquid foods.

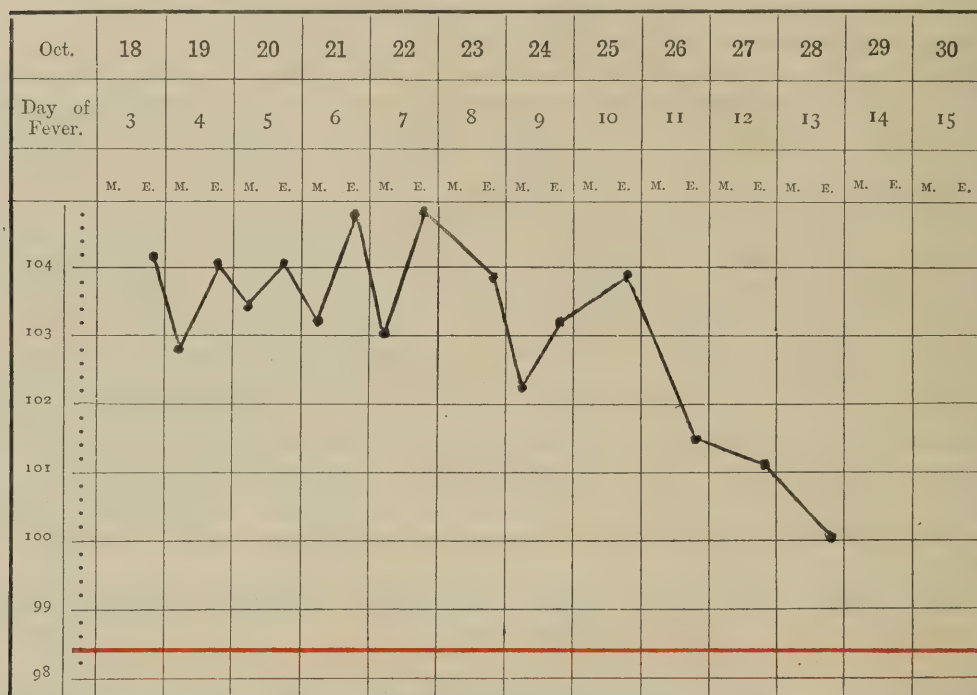
From the 11th day, only an evening observation of the temperature was made, the morning one being found valueless for purposes of prognosis and treatment. The fall to 101.4 on the evening of the 11th day led me at first to hope for a change for the better; but, though the fall continued on the 12th and 13th days, there was no corresponding improvement in the general symptoms, but rather the reverse. No observation was taken during the last 36 hours of the patient's life, and I cannot tell whether or not a rise occurred just before death, as in Dr. JAMIESON'S case (*Customs Medical Reports*, No. 4, page 95); but, judging from the coldness of the extremities, the presence of clammy perspiration and cyanosis, it appears that the tendency from the 11th day of the fever was towards loss of surface heat, and death from congestion of the abdominal and thoracic viscera, the state denominated *febris algida*.

NIEMEYER and others regard this condition as produced by the continuance of a high temperature causing a supply of super-heated blood to the nervous centres. We have, however, in other diseases, notably in typhoid fever, a higher temperature than in this case, and that continued for a much longer period, without, in the great majority of instances, bringing on this state. Moreover, this view in no way explains

the suddenness of the change of type. In this, and in all the other instances of this fever that have occurred here, the patient seemed to be passing through an ordinary intermittent or remittent, as the case might be; presently slight confusion of ideas was observed, and in a few hours he was in profound coma, with stertorous breathing, "fly-catching," convulsive jerking of the muscles, and cyanosis.

I add the temperature chart.

Temperature Chart of a Case of Malignant Remittent Fever.



This form of fever seems to me to present several points of resemblance to the worst cases of the African remittent of the Gold Coast, of which the most careful account I have yet met is that by Dr. DONNET of the Naval Hospital, Haslar (*Lancet*, Feb. 14, 1874, pp. 227-9). Dr. DONNET states:—

The majority of those who fell ill were, as a rule, at first seized with chills, followed shortly after by the symptoms of remittent fever. Vomiting was always present, and in so obstinate and distressing a form as to resist all measures adopted to counteract or to diminish its violence; the matters vomited were sometimes the ingesta alone, sometimes bile, and sometimes bile mixed with glairy fluid and secretions of the stomach; in one, the matters resembled black vomit. This symptom of vomiting was frequently the first that marked the onset of the disease.

* * * Combined with the symptoms enumerated above, there were observed in all these cases a high temperature at night, a quick and weak pulse, a coated tongue, fetidity of breath, general malaise, wandering and delirium in some, and in all the spleen was found enlarged. In four, the action of the poison was such as to act directly on the sensorium and to produce a state of coma; this grave state was preceded by chills, general malaise and vomiting, and was accompanied with a low temperature of the body and cold sweats (the algid state of some authors). Two of these four cases terminated fatally; they were the only fatal ones among the number of remittent fever cases admitted. The spleen in these two fatal cases was the organ chiefly affected; it was large (weighing in one of them 36 ounces), was soft, easily broken down, and of a dark-purplish, clarety colour. In both these cases *the intestines were healthy in their whole extent*.* The liver was large, and, as examined microscopically by Mr. Charles BARRON, "was found to contain numerous oil-globules; the hepatic cells were unusually pale and studded with oil-globules, and numerous "dark granular spots were seen scattered among the cells. Bacteria were numerous."

* The italics are Dr. DONNET'S.

As compared with this account of the African remittent, it is interesting to note that the post-mortem in Dr. JAMIESON'S case showed :—

Head.—Arachnoid thickened and opaque, especially over the cerebellum. Very extensive subarachnoid effusion on the surface and at the base of the brain. Pia mater much injected. Sinuses full of blood. Convexity of anterior lobes much shrunken. No inflammation or congestion of cerebral or cerebellar substance. Lateral ventricles distended with clear serum.

Abdomen.—Liver considerably enlarged and very soft; evidence of fatty degeneration on section; old adhesions to parietal peritoneum on surface of right lobe. Spleen small but very friable. Kidneys enlarged and slightly congested.

It is to be remarked that in the worst cases of the African fever "head symptoms" were present, and taken notice of as of grave import. This quite coincides with my experience of mixed fevers here, and in the Report already referred to I stated that "the smallest amount of delirium occurring at any stage in the "course of a periodic fever should be looked upon as a symptom of the greatest gravity."

Can the onset of malignancy in this obscure form of fever be regarded as an acute inflammation of the brain or meninges produced by the initial fever, intermittent or remittent as the case may be?

The season of the year excluded heatstroke, and the history and course of the disease excluded typhus. In this case, and in the other four, the cerebral symptoms were the most prominent ones, and all the cases terminated fatally. NIEMEYER (*Text Book of Medicine*, translated by HUMPHREYS and HACKLEY, vol. II, p. 630) speaking of what he terms *febris intermittens comatosa*—the nearest approach I can find in his book to the form under consideration—states as the result of his experience that "when these cases "terminate fatally we do not generally find any anatomical changes in the brain." Dr. JAMIESON'S case shows the reverse of this; in the African cases the state of the brain is not mentioned. In the present case there was no symptom of the spleen being involved, but one could not affirm that it was not, in the absence of an autopsy. In the two fatal African cases "it seemed to be the organ chiefly affected," but Dr. DONNET makes no mention of pigmentation. During a fatal epidemic of *intermittens cephalica* occurring in the experience of Dr. FRERICHS, NIEMEYER states that the cases "developed partly from simple intermittent paroxysms, "had an intermittent or remittent course, and partly yielded to quinine." In 28 of the fatal cases FRERICHS found that the dark colour of the brain was absent in 6. He therefore doubts that the severe cerebral symptoms observed in all these cases were caused by obstruction of the cerebral vessels from pigment.

It appears then in conclusion, that the etiology and pathology of these cases of "malignant" intermittents and remittents have yet to be worked out; particularly as to the condition of the liver, spleen, brain and spinal cord and their relations. This can only be done by a series of careful autopsies, and it is very desirable that one should be had whenever practicable. It is in this way only that all the points can be decided; such expressions as "malarial influences," "paludal cachexia," and even "blood poisoning"—used, as these terms too often are, in the sense of expressing facts instead of mere hypotheses—tend to obscure rather than to clear up the question. For the present, one thing seems certain—that quinine, so valuable in the other fevers of this country, is at least useless if not positively hurtful when once this particular type has declared itself. Stimulants also fail, though persevered in to the extent of enormous quantities given according to the state of the pulse and the general symptoms.

(b.) *Temporary Mental Disturbance.*—The case so noted was rather curious. It consisted of a series of maniacal paroxysms with delusions, extending more or less over several days. The subject was a gentleman about 24 years of age, and the cause was supposed to be mental anxiety. There was no reason to suspect delirium tremens, and the patient had received a severe blow on the head in Japan two years ago. After rest and change patient quite recovered, and no trace of after effects was present two months afterwards.

(c.) *Dysentery.*—It is gratifying to learn from the letter of a fellow passenger that the patient referred to in Report No. 4, p. 63, sent to England as incurable in China, "completely recovered before the "end of the voyage." My friend adds gleefully "so much for a sea voyage in dysentery!"

The fatal case is instructive as showing the relation between intestinal ulceration and hepatic abscess. The patient, a British seaman, arrived from Shanghai in a hopeless condition; he was taken to the Seamen's

Hospital where he lived for several days. The characteristic symptoms were copious gushes of dark fluid blood from the gut from time to time, and the horrible fetor of the stools.

Post-mortem Examination 7 hours after death.—Body much emaciated. Rigor mortis well marked.

Abdomen.—Recent adhesions of peritoneum to omentum, and a gangrenous portion of intestine visible on right side. Portal vein normal. Spleen weighs 7 ounces, normal. Kidneys enlarged, weighing together 14 ounces—otherwise normal. Stomach contains about $\frac{1}{2}$ pint of greenish fluid—mucous membrane of stomach normal.

Intestines.—Mesenteric glands much enlarged. Vessels at lower part of mesentery congested. Intestinal tract pretty healthy down to last foot of ilium. Peyer's glands contain yellow exudation, and the mucous membrane covering them is congested. Ileo-cæcal valve half destroyed by ulceration. Sac of cæcum distended and gangrenous throughout, and adherent to iliac fascia. Appendix vermiformis adherent. The whole of the large intestine, with the exception of a portion of the transverse colon, is one mass of ulceration. It is friable and much thickened, and what remains of mucous membrane is covered with muco-purulent deposit. The bleeding during life seems to have come from the cæcum, as it contains metamorphosed clots, and no blood is present in the remaining portion of the canal. The rectum is much thickened and ulcerated throughout. Liver not enlarged, weighing only 4 lbs 2 oz. Superior surface of liver mottled but smooth. On section the colour is paler than usual, and throughout the greater portion of right lobe there are numerous cavities, in size from No. 8 to No. 1 shot, containing purulent matter. Other organs not examined.

It is evident in this case that the hepatic complication was secondary to the dysentery, and from the small size of the abscesses it is probable that the deposit was of comparatively recent origin. Indeed, so far as could be elicited from the patient, he had been ill for a month only—a short period for the development of such extensive intestinal disease. The specimen taken for microscopic examination was unfortunately lost.

NIEMEYER, commenting on BUDD's views with regard to the causation of suppurative hepatitis, remarks (*Text Book*, vol. 1, p. 638):—Suppurative hepatitis develops more frequently from ulceration or other gangrenous affections of the abdominal organs. It has been found complicating ulcers of the stomach, intestines, and gall-bladder, and, in some few cases, abscesses of the liver have been seen to follow operations for hernia, or about the rectum. In these cases it is most natural to suspect an embolus of the portal vein, or the transfer of injurious irritating matter to the liver by the portal blood; but, so far, it has been impossible to obtain any positive proof of this. BUDD believes, and most authors agree with him, that the majority of cases of hepatitis of the tropics belong to this class. It is true that it is very rarely a primary disease, but is almost always secondary to the dysentery endemic in the tropics; but it has not been found in this form either, that the transfer of particles of gangrenous mucous membrane or of putrid fluid from the large intestine to the liver has induced the inflammation in the latter, and still less that this is the sole cause of hepatitis in the tropics. The fact that epidemic dysentery in our country is hardly ever complicated by hepatitis, although with us, also, there are extensive gangrene of the mucous membrane and putrid decomposition of the contents of the large intestines, rather militates against BUDD's view of the subject."

The statement contained in the last sentence is a very remarkable one, and, if the facts be found to obtain generally, it leaves this interesting question still *sub judice*. The discussion on pyæmia at present going on in England and on the Continent will probably elicit facts bearing on this point.

(d.) *Talipes varus*.—This case, which occurred in the practice of my friend Dr. POUJADE, of the Arsenal, deserves notice from the simplicity of the means used for the cure of the deformity, and the complete success attending them. Dr. POUJADE divided the tendones Achillis only, and trusted the rest to an apparatus specially ordered for the case from M. COLLIN, Paris. The deformity, especially of the right foot, was so great that, taking also into consideration the age of the child (over 2 years), I expressed doubts of success to Dr. POUJADE, and advised him to divide also the tendons of the tibiales anticus and posticus of the right foot. He preferred the milder course first, and the result is that now, just four months after the operation, the feet are in normal position, and the child can walk without the aid of the apparatus, though of course it will still be applied until the parts have required the requisite firmness. It was applied on the fourth day after section of the tendons. The apparatus is of steel, and has the usual straps, buckles and foot-piece, and a hinge-joint at the knee. It is very light and elegant, weighing only 950 grammes for both legs (about 2 lbs.), and it admits of four motions, elevation and depression, inversion and eversion. It cost in Paris 250 francs. Dr. POUJADE took his practice in this case from a pamphlet published as long ago as 1838, entitled *Mémoire sur la section du Tendon d'Achille dans le traitement des Pieds-Bots*, par M. BOUVIER.

III.—General Remarks.

It will thus be seen that the health of the Anchorage for the six months was good. There were only 2 deaths, one of them that of a man imported in a dying state. This, to a population of 400, gives the low death-rate of 5 per 1,000 for the period in question.

The health of the Customs staff at the Anchorage was excellent. With the exception of one poor fellow, a tidewaiter, sent home with hopeless valvular disease of the heart, they experienced no sickness at all. The patient was a powerfully-built Highlander from the West of Scotland. The case was of the regurgitant form of valvular disease. All the valves seemed to be more or less affected, the mitral particularly so. As the disease progressed, the second sound of the heart could not be heard, the blowing murmur accompanying the systole completely obscuring it. The radial pulse could seldom be felt, never counted. There was the usual dyspnoea and cough (no hæmoptysis), cyanosis, anasarca, and finally ascites. The abdomen was tapped several times with, of course, only temporary relief. The disease was undoubtedly contracted in China, and I can assign no cause, though the patient had been under my notice for several years before its appearance.

This man's death at home is only a question of time, and if we include it in the mortality returns for the Anchorage it will compensate for the case imported moribund. If included absolutely, the death-rate for the 6 months is 7.50 per 1,000.

The service regulation that a candidate for the appointment of tidewaiter or lightkeeper shall pass a medical examination before being admitted to the permanent staff will, I think, work well for the efficiency of the service, by way of excluding men whose constitutions have become debilitated from various causes.

Referring again (*vide* Report No. 5, pp. 43-46) to the subjects of mortality returns and life assurance rates, it is gratifying to note that the establishment of an office in China taking lives at home rates has become an accomplished fact. The writers of these Reports may, I think, fairly congratulate themselves on having had a share, in common with the general press, in bringing about this very desirable result. To elaborate a system of probabilities, approaching to anything like the mathematical accuracy of the celebrated "Carlisle Tables," is impracticable in China, and, considering the active spirit of commercial enterprise in our days, it is not to be expected that this will be waited for.

There is one important point to which, so far, I have seen no allusion made in the discussion, viz., the fact that the best offices reduce the annual premium to home rates on the return of the individual to Great Britain. In doing this, they practically ignore the possibility that residence in China lays the seeds of future disease, and therefore vitiates a life. As to whether it does or does not, I have no data on which to found an opinion; at all events, the offices take no notice of it, and thus, in view of the mortality returns, the rates charged for mere residence appear more oppressive than ever.

With regard to the colony of Victoria—the only part of China in which foreigners reside not included in these Reports—I quote the following from the *China Mail*:—

The interesting Report of the Colonial Surgeon for 1873 affords scope for considerable comment, far more than we can find space for on this occasion. We therefore content ourselves with drawing the particular attention of Life Insurance Companies to the remarks made by Dr. AYRES as regards the average mortality of the Colony. This he finds to be much less in proportion than in the previous ten years, and more than one-fifth less than in 1872. For the whole ten years this terribly dangerous place of residence gives an average percentage of 3.19; while for 1873 it was only 1.94, or more than a fifth below that of London. * * * No wonder that people are beginning to resent the squeezing policy which some companies adopt, in obliging insurers to pay a hundred per cent. on home rates.

IV.—Notes on the Disease of Dogs known here as "Worms in the Heart."

I think I need offer no apology for introducing here a few remarks on what, as will appear presently, is found to be one of the most common diseases of dogs in China. The subject is particularly interesting when taken in connection with the human filaria discovered by Dr. LEWIS in India, in the urine of patients suffering from chyluria, and subsequently in the blood-vessels.

The specimens that are the subject of these notes were sent me by Dr. BEAUMONT of Foochow, and were taken by him from the heart of a native dog that died there last year. They had been in spirits for about two months. The general appearance was very much that of a mass of small fiddle-strings, or vermicelli as we see it in soup. The creatures were rolled on themselves and matted together with what were found to be smaller worms. After a long and careful examination, I found these filariæ to be identical with those described by Assistant-Professor WELCH of Netley, in the *Lancet* of March 8, 1873, and, so far as a comparatively limited skill in the use of the microscope will allow me to judge, his description is accurate and exhaustive.

Dr. WELCH's specimens were taken from the heart of a dog that died in Shanghai in 1865, and so far as I can learn, they had attracted no attention until examined by him in 1873. In the present specimens (examined up to 500 diameters) I could not detect any free embryos in the uterine cavity, and though the ova were numerous, and in many instances apparently mature, no embryos could be freed by pressure on the covering glass of the slide and rupture of the capsule. This difference may be due either to accidental circumstances or to imperfect observation. Up to the present time I have not succeeded in securing a living specimen.

After a minute anatomical description of the hæmatozoon, Dr. WELCH concludes that "the mature worm may be summed up as a filiform, musculo-cutaneous cylinder, loosely enclosing an alimentary, generative, and water-vascular system, the reproductive organs largely predominating, and opening on the anterior half of the worm, near the head; the alimentary canal consisting of a single blind tube, commencing in a papillary circular mouth, and the breathing orifices mainly located towards the tail."

Dr. COBBOLD has been diligent in investigating the subject, and he has published his results from time to time (*British Medical Journal* and *Proceedings of the Zoological Society*). He informs us that this canine hæmatozoon had already been recognised abroad as a new and entirely distinct species, and had been named the *Filaria immitis*. He thinks the designation a happy one, and considering that we find ropes of these parasites in the blood-vessels of dogs in China, and masses of them blocking up the cavities of the heart, the specific term seems certainly to be apt enough. I must leave to more competent observers the question of the anatomical and physiological relations of the canine filaria to the human hæmatozoon of Dr. LEWIS, and to the other known nematoid worms, and pass on to what is my main object in these notes, viz., to give a brief account of this disease of dogs as we find it in China.

My friends the practitioners at the different ports, to whom I have applied for information, have in every instance replied in the kindest way, and I cannot do better than give their experiences first, and then try to draw some general conclusions.

Dr. ADAMS, of Hongkong, writes that his attention has not been called to the subject, and that he has not heard of a case in Hongkong. He adds that dogs there may be subject to the disease, nevertheless.

Dr. BEAUMONT, of Foochow, states that the disease is very common there. Death, in the majority of instances, comes on suddenly, suggesting poisoning or violence. In a few instances, Dr. BEAUMONT thinks that a fair diagnosis might be made during life by a man well acquainted with the habits of dogs, and especially by one who is familiar with their ways of expressing disease. He remarks, in particular, a languid, sleepy look in the animal, and a tendency to drop the muzzle, nose downwards, between the fore paws extended on the ground. In one or two cases there were symptoms of general malaise—unsteady gait, and dragging of the hind legs.

At the request of friends, Dr. BEAUMONT has opened many dogs, and found worms in the heart. One case was peculiar. The animal, a favourite dog of the St. Bernard breed, died suddenly, suggesting poisoning. On examination, there was found a collection of blood in the abdominal cavity, but only a few worms in the heart. The source of the bleeding was traced to an opening in the hepatic artery. The question was, had this been caused by one of the filariæ perforating the vessel, or by disease of the coats, or by violence. One of the latter seems to be the more probable explanation, because, as it appears, these parasites are very common in the vascular system of dogs here, and as the creatures are not furnished with a special perforating

apparatus, it is unlikely that they could go through the coats of an artery. No treatment has been tried in Foochow, and, as Dr. BEAUMONT observes, it is difficult to see how any could be applied, except in a few exceptional cases, when "a shot" might be made at the disease, before the symptoms immediately preceding death appeared.

Dr. JAMIESON, of Shanghai, writes :—

Death from this cause is very common here, but I have examined only two cases, and in neither had I time to investigate the blood and the muscles. In many instances the dog appears quite well up to 24 hours before death, and alarming symptoms come on so suddenly, and succeed one another so rapidly, that poisoning is suspected. As a general rule here, the dog vomits a quantity of blood, staggers about, and dies either exhausted or in a convulsion. In one case which I dissected with Mr. HALLITT, there was a continuous rope of worms stretching from the right hepatic vein, through the cava, into the right auricle, and thence, by a fine twist of one or two worms, through the tricuspid valve into the right ventricle. Unluckily I did not follow, or rather try to follow the rope through the pulmonary artery until it was too late, and the parts were cut about. But on opening the left auricle I found it simply packed with worms, and drawing on the mass puckered up the lungs. I therefore carefully followed the pulmonary veins backwards, and found that the mass in the left auricle was only the middle of a rope fourteen inches long, which stretched into both lungs, and which was without difficulty drawn out and laid on the table for measurement. No doubt there was a continuous string from the right ventricle, but I cannot affirm it. There was not a single worm in the left ventricle, nor did there appear to be any attempt at perforating the walls of the heart. Of course I cannot say whether the extremity of the rope in the hepatic vein was the beginning or the end, but it is at least suggestive that the liver should have been one of the termini. At the same time, Dr. LITTLE tells me that he once traced a single worm from a vein at the knee of a dog (I don't know which knee) right along into the right auricle. I dare say you have seen in a report of the Museum meeting here the other day (*Daily News*, 13th April), that Dr. MACGOWAN referred to a case occurring in Shanghai long ago. I don't think any treatment has been tried, and, in fact, the onset of the symptoms is so rapidly followed by death that treatment seems hardly possible.

Dr. DUDGEON, of Peking, informs me that he has instituted inquiries among the Chinese, and he is led to believe that the disease does not exist there, but, as he adds, the natives do not make dissections.

Dr. MYERS, of Chefoo, writes :—

On the 29th December last, I sent Professor COBBOLD the heart of a dog filled with the parasites of which you speak, and also another preparation of part of the œsophagus of the same animal, that lay just behind the bifurcation of the trachea, between which latter and the anterior wall of the œsophagus were situated the bronchial glands, two of which were filled with the filariæ. One of the glands communicated with the gullet by a foramen (very patent), and with its body half through this aperture (*i.e.*, half in the œsophagus and half in the gland) was one of these worms. In the same dog, we found one of them just behind the tongue. I have seen them in the pulmonary artery and in the substance of the lungs, in the bronchial glands and in the œsophagus, but I cannot say elsewhere, although I have looked for them. I should tell you that Dr. CARMICHAEL and myself were making a series of experiments on an unknown Chinese poison, and so have killed several dogs, and in making the dissections I came on the worms, and carried out the investigations which I have communicated to you and to Dr. COBBOLD. I have since been observing the parasites, but have not yet succeeded in coming to any satisfactory conclusions. They are very common amongst Chinese dogs, but those imported from Europe seem to acquire them more readily, and to a more rapidly fatal degree, than the native dogs. *Every dog (all were native) we opened had them to a lesser or greater extent.*

I have on two or three occasions been asked to open foreign dogs supposed to be poisoned, and found death to be due to embolism, a matted mass of worms forming the nucleus of the clot; or in other cases one of these masses has been separated from the chamber of the heart, carried into the aorta (generally) and completely occluded it.

Some of the dogs showed symptoms for some time before death, such as inability to run fast or for long, great breathlessness, and having to lie down after comparatively slight exertion. They apparently ate well, however, and seemed inclined to be brisk. I have never seen any symptoms of effusion anywhere, either ante or post-mortem. The symptoms of, I think, all my canine subjects (foreign) which just preceded death, were but few. In most cases the animal was in the act of running or frisking about—in fact, taking active exercise in some way or another, when it suddenly whirled round and round three or four times and fell down without a struggle.

With one exception, I have never seen these worms in any other animal—but then I have not looked for them. I found one or two (very few) in the right ventricle of a horse that died from spasmodic colic, and which I was asked to examine. The horse showed no symptoms of respiratory difficulty during life, and his death had nothing to do with the cardiac lesion.

From a study of these interesting communications, and of the subject as a whole, I think the following general conclusions may be drawn :—

(1). That this disease of dogs is very common in China. Dr. BEAUMONT and Dr. JAMIESON state that death from this cause is very common in Foochow and Shanghai respectively, and in the investigations of Dr. MYERS, of Chefoo, the animals were killed for another purpose, viz., to test the effects of an unknown Chinese poison, and in all his cases the filariæ were found in the vascular system.

(2). That the canine hæmatozoa cause death in a purely mechanical way, by occluding the blood-vessels and the cavities of the heart.

(3). That treatment is scarcely possible, since, except in a few instances when the disease can be recognised during life, the final symptoms come on suddenly, and the case ends fatally before any treatment can be applied. In the few exceptional cases I might suggest that santonine be tried, from its known deadly effect on the usual nematoid worms of the intestinal canal, the *ascaris lumbricoides*, and the *ascaris vermicularis*. It would require to be administered early in a suspected case, for even if it did kill the fully-developed filariæ, it is difficult to see how they would be more harmless dead than alive in the way of blocking up the blood-vessels and the cavities of the heart.

(4). That the disease occurs pretty equally in native and foreign dogs, whether the latter have been born in the country or imported.

(5). That many cases of supposed poisoning of dogs on the part of native servants are probably to be referred to this cause. Our domestics, whatever may be their other faults, cannot be said to be addicted to poisoning.

(6). With reference to the etiology of the disease and the mode of ingress of the parasites into the vascular system. The idea in Foochow among the foreign community is that dogs get "worms in the heart" from drinking the water of the stagnant pools about the settlement, and the residents try, so far as they can, to keep their dogs from these places.

However this may be, and taking the subject as a whole, I think that the bulk of evidence goes to show that the germs of the canine filaria are taken into the intestinal canal by ingestion. Once admitted into the gut, they could find entrance into the blood through a lacteal or a blood-vessel (especially if an open ulcer occurred), and thus they could traverse the circulation, for it has been shown that the diameter of the embryo is less than that of a white blood corpuscle. Dr. KRABBE states (according to Dr. COBBOLD) that the young are produced *viviparously* and carried along in the circulation. There is, therefore, no difficulty in explaining their wonderfully rapid reproduction within the vascular walls, and how it is that they become numerous enough to form ropes in the blood-vessels and masses in the cavities of the heart, as shown by the foregoing dissections.

Dr. JAMIESON traced the filariæ from the right hepatic vein through the cava into the right auricle, thence through the tricuspid valve into the right ventricle. He found the left auricle packed with the worms, and they were present in the substance of the lungs and in the pulmonary veins. Dr. MYERS found them in the pulmonary artery, and they have been frequently observed in the left ventricle and in the aorta. Thus, they have been traced from the hepatic vein to the aorta.

The embryos would be received into the alimentary canal by ingestion, be admitted into the intestinal capillaries and passed along into the vena portæ; thence through the capillaries of the liver into hepatic vein, vena cava, right auricle, right ventricle and pulmonary artery, to the lungs; returning, they would be carried along pulmonary veins into the left auricle, left ventricle, and thence into the aorta and the systemic circulation. Or, they would enter by the lacteals, be carried along the thoracic duct and discharged into the left subclavian vein. They would then go the round of the circulation until, by increase of growth or aggregation, a stasis occurred at some point, and this would form the nucleus of the rope in the vessels, or the ball in the cavities of the heart.

(7). It is satisfactory to be able to state, in conclusion, that, so far as is known at present, the disease does not exist in the human subject in any part of China. It might, however, be well to act on the suggestion made by Dr. LEWIS with reference to India, viz., to subject the blood to a thorough microscopic examination in those cases of obscure disease that occasionally occur in man in tropical and sub-tropical countries. Dr. LEWIS has frequently detected the similar filaria of man by simply pricking the extremities of the toes and fingers with a needle; and on one occasion they so pervaded the vessels that six specimens were contained in a single drop of blood taken from the lobule of the ear.

B.—DRS. CARMICHAEL and MYERS' Report on the Health of Chefoo,
for the year 1873.

FORMER Reports from Chefoo contain all the general information relative to the port which can be gathered, and we therefore find the requirements of this paper confined within somewhat narrower limits than those of the preceding ones.

The general health of the community has been good, and, as will be seen by reference to the mortality table, out of the three deaths which have occurred amongst the residents, two were brought about by causes with which climate had nothing whatever to do. In the third instance we cannot acquit our port of the responsibility, although perhaps we may attribute to its opposing influence the fact of the case being happily only a solitary one. More detailed reference to this case of scarlatina maligna will be found farther on. It may not be out of place here to bring forward the suggestion that the Insurance Offices might, with propriety and safety, make even greater reductions for persons resident in this port than those which we observe have been effected by one office at least. The risk of life here is quite as small as, if not less than, that run anywhere at home, and it would seem high time that theory, based on erroneous hypothesis, should give way to fact discovered by actual experience. Nor do we believe that this knowledge is confined to those who have resided in Chefoo, but somewhat confidently rely on being corroborated by those who, though not permanent residents, have had opportunities of judging of the correctness of our statements. That this may be said of other northern ports, we are aware; but for the present, dealing as we are with the sanitary features of Chefoo, we refrain from entering into matters which might appear foreign to the subject.

We now proceed to give the Meteorological tables. No. 1.—The instruments are placed at an elevation of about ninety feet above the sea. No. 2.—These instruments (for the readings of which we are indebted to the Harbour Master, Mr. HOWARD,) are placed at the Custom House Jetty, in the settlement. It may be interesting to contrast the two tables, while, at the same time, a more correct idea of the atmospheric conditions will thus be arrived at.

No. 1.—Mean Meteorological Observations.

| MONTH. | THERMOMETER. | | | | | | | | BAROMETER. | | RAINFALL. |
|------------------|--------------|-------|----------|-------|----------|-------|----------|-------|------------|---------|-----------|
| | Morning. | | Evening. | | Morning. | | Evening. | | Morn. | Eve. | |
| | Max. | Min. | Max. | Min. | Wet. | Dry. | Wet. | Dry. | Inches. | Inches. | |
| May, | 73.00 | 59.00 | ... | ... | 63.46 | 71.90 | ... | ... | 29.84 | ... | ... |
| June, | 73.75 | 68.45 | 76.30 | 68.57 | 66.58 | 73.76 | 64.34 | 69.64 | 29.84 | 29.79 | 1.50 |
| July, | 84.04 | 74.93 | 85.37 | 79.60 | 73.38 | 82.59 | 76.55 | 77.24 | 28.61 | 29.74 | 8.0 |
| August, | 85.90 | 68.66 | 84.22 | 74.45 | 76.59 | 80.45 | 73.59 | 75.77 | 29.17 | 29.82 | 7.3 |
| September, | 75.39 | 68.60 | 75.16 | 66.96 | 70.84 | 74.46 | 67.52 | 69.60 | 29.60 | 29.97 | 1.9 |
| October, | 61.74 | 54.61 | 64.61 | 63.32 | 60.80 | 62.48 | 57.61 | 58.48 | 30.17 | ... | 5.7 |
| November, | 52.83 | 52.33 | 56.03 | 44.56 | 45.96 | 51.83 | 45.20 | 46.10 | 30.22 | ... | 0.1 |
| December, | 41.03 | 33.00 | 41.48 | 34.87 | 37.58 | 40.54 | 34.41 | 36.70 | 30.21 | ... | snow |
| January, | 30.06 | 23.61 | 37.45 | 25.38 | 28.80 | 30.09 | 27.00 | 27.48 | 30.30 | ... | snow |
| February, | 34.96 | 29.82 | 37.96 | 30.64 | 32.89 | 34.71 | 31.25 | 33.07 | 30.33 | .. | snow |
| March, | 41.70 | 34.00 | 41.93 | 35.41 | 37.55 | 39.59 | 36.58 | 38.12 | ... | ... | ... |

No. 2.—Customs (Mean) Meteorological Observations.

| MONTHS. | THERMOMETER. | | BAROMETER. | |
|------------------|--------------|------|------------|-----------|
| | Max. | Min. | Noon. | Midnight. |
| April, | 49° | 34° | 28.08 | 29.40 |
| May, | 74° | 60° | 28.64 | 29.61 |
| June, | 73° | 65° | 29.71 | 29.65 |
| July, | 89° | 77° | 29.82 | 29.82 |
| August, | 88° | 73° | 30.67 | 30.62 |
| September, | 75° | 63° | 29.37 | 29.44 |
| October, | 66° | 56° | 30.26 | 30.26 |
| November, | 53° | 41° | 29.62 | 30.28 |
| December, | 44° | 31° | 30.37 | 30.37 |
| January, | 35° | 20° | 30.40 | 30.41 |
| February, | 34° | 25° | 30.33 | 30.31 |

The following is a tabular report of the deaths which have taken place during the past year:—

| No. | SEX. | DISEASE. | CASES. | REMARKS. |
|-----|---------------|-------------------------------------|--------|-------------------------|
| 1 | Male, | Apoplexy, | 1 | Resident. |
| 2 | Female, | Dysentery and Abscess of Liver, ... | 1 | Non-resident. |
| 3 | Male, | Scarlatina Maligna, | 1 | Resident. |
| 4 | " | Tetanus, | 1 | Non-resident. |
| 5 | " | Drowned, | 1 | Non-resident. |
| 6 | " | Syphilitic Laryngitis, | 1 | Resident. |
| 7 | " | Dysentery, | 1 | Non-resident. |
| 8 | " | Convulsions, | 1 | Infant a few hours old. |

Total number of deaths, 8; namely, three residents and three visitors (all of whom were suffering on arrival from the disease to which they succumbed), one seaman drowned, and an infant soon after birth.

Analysis of Mortality Table.

No. 1 was a man of more than middle age and enormously obese. No. 2.—The patient (æt. 4 years) arrived here from Shanghai suffering from remittent fever and dysentery, which running a rapid course brought about a fatal result. The liver was found to be riddled with abscesses; a large one burst two days prior to death into the cavity of the right pleura without causing more than slight collapse at the time of its rupture, or any marked inconvenience. A second abscess however bursting into the cavity of the peritoneum caused immediate collapse and death. The autopsy further revealed caseous degeneration of the intestinal glands and two or three large ulcerative patches at and round the ileo-cæcal valve. The heart contained two or three fibrinous clots. No. 3.—Considerable interest attaches itself to this case, the symptoms and post-mortem appearances of which being so distinctive of scarlatina maligna as to render this, the first recorded instance within our knowledge of the disease in China, worthy of special note, and this fact becomes more interesting when we remember that other forms of eruptive fever are exceedingly common. Variola, varicella and rubeola (the latter often of a malignant type and with diphtheritic affections of the larynx) being known to prevail generally. But although China is alleged to have an immunity from scarlatina, this is probably merely an inference from the fact that it has not hitherto been observed. But such negative evidence scarcely justifies us in assuming its non-existence, especially when we consider the few opportunities enjoyed by foreign physicians for a careful study of the

disease amongst the native population. Before giving a detailed account of the case it may be mentioned that there was an endemic of rubeola and varicella in the adjoining villages during the whole of the autumn and at the date of this case. The following is a description of the case:—

The patient, *æt.* 1 year, was first seen early on the morning of the 10th of October. The mother stated that the child had been restless and feverish during the night, having vomited shortly before the visit. The temperature was slightly elevated, pulse 100, and several pale reddish patches were apparent over the chest, arms and legs. A similar eruption had been observed during the night, appearing and disappearing in different parts of the body. Towards evening the feverish symptoms had somewhat subsided and the little patient fell into a quiet sleep, which lasted until the morning of the following day, when a severe exacerbation of all the symptoms took place. Surface of the skin was of a lobster-red; pulse 120, temp. 103°. The patches had given way to a general efflorescence on the whole surface, especially on the chest and abdomen. Tongue red, furred and with raised papillæ over tip and margin. The fauces were inflamed. *October 12th.*—Patient had slept during the night but with restless intervals. Respiration not much quickened and the power of swallowing unimpaired. Tonsils considerably increased in size. Tongue intensely red. Lymphatics of the neck prominent and tender to the touch. *Urine*, no albumen. *13th.*—Rash on abdomen disappeared during the night for several hours but re-appeared early in the morning, assuming a purplish hue. Feet and hands much swollen. Much yellowish excoriative discharge from the nostrils. Tonsils much ulcerated, throwing off white semi-membraneous patches. Severe paroxysms of dyspnoea occur frequently, with intervals when the respiration is tranquil. Deglutition has now become difficult. As evening advances great depression has set in and all the symptoms increase in severity. The night was passed in continued restlessness, and early in the morning of the 14th the case suddenly terminated by an attack of syncope whilst the child was in a bath.

Autopsy.—Body well nourished, great deposit of subcutaneous fat. Palate slightly covered with patches but not extending lower down. Tonsils enlarged and extensively ulcerated. Larynx slightly œdematous. Thorax.—Lungs, posterior aspect showed recent engorgement, otherwise healthy. Heart.—Fibrinous coagula in both cavities. Abdomen.—Liver slightly engorged. Spleen remarkably soft and pulpy. Kidneys natural size, capsule not adherent, surface slightly congested. Under a low power of the microscope the vessels were seen to be dilated. Malpighian tufts red, and standing out prominently. Head and spinal column not examined.

Note.—With reference to the fibrinous coagula found in the heart we take occasion to call attention to the almost invariable presence of similar formations in every case of death from acute disease which we have had an opportunity of examining. With young and old we have found them so often that we feel almost inclined to speak of their occurrence as the rule, and in most of the cases we feel justified in saying that these formations cannot have been long in existence or have preceded death for any long period.

No. 4. *Tetanus.*—This was a seaman from a British vessel who had sustained, a fortnight previously at sea, a compound comminuted fracture of the lower third of the leg. The captain had striven to do everything in his power for the patient's relief and had so strictly followed the directions given in his "Medical Guide" that he entirely suppressed all circulation in the leg, and the unfortunate man was landed here with his whole limb in a horrible state of gangrene.

Amputation was performed through the tibial tuberosity, but in a few hours tetanic symptoms showed themselves, and he soon died. This is a good occasion to call attention to the verbose and complicated directions given in some medical books put on board ship for the guidance of captains. We have frequently seen bad effects follow the treatment which the instructions suggest to the confused mind of the master, and unhappily the more zealous he may be in carrying out what he supposes is the proper treatment the more likely is he to do harm. In this case had the captain contented himself with laying out the leg at length and then applied his cold water dressings, we should probably have had a very different result to record, but tightened as the bandages were in order to render the splints secure and the fragments in as close apposition as possible, we cannot wonder at the condition in which we found the poor fellow. The meddlesome medical practice sometimes found amongst ship-masters, who doubtless are actuated by the best possible

motives, may also be well illustrated by a case which came under our notice some years ago. A seaman was landed from a British vessel here for medical attendance, who gave the following history of his case. Twelve months previously, when on a voyage from Europe to Shanghai, he fell from aloft on the deck, and sustained an injury to his left testicle which became swollen and painful. After using various applications which failed to afford relief, the master pronounced it a case of abscess, and without further consideration made a deep incision down upon the testicle, "when," as described by the man, "the stone shot through the opening." The master, fearing he had made a mistake, attempted to return it to its natural position but without effect. The poor fellow underwent a long course of treatment for the reduction of the organ until his arrival here, when he was found to be in a very serious condition. A large fungoid mass protruded from the opening in the scrotum; there was an offensive discharge; at times a great deal of hæmorrhage, also periodical pains which were very distressing. He was very much emaciated, so weak as not to be able to walk; his complexion was of a dirty greenish yellow; pulse small, 120. Under such circumstances there appeared to be no other alternative than the extirpation of the then hopelessly diseased testicle. The operation was accordingly performed to his relief and restoration to health.

No. 5 was a ship captain drowned at the wreck of his own vessel.

No. 6 for many years had been a confirmed dipsomaniac, and was deeply impregnated with the disease which eventually carried him off.

No. 7 was a seaman landed from a French vessel. He suffered from dysentery for more than a year, and was in a desperately low condition when first seen.

Therapeutics. Our attention has been called to the *ailanthus glandulosa* 臭椿樹 chow-chun-shu, as a native remedy for dysentery. DEFONTAINES describes this species as belonging to the natural order *Xanthoxylaceæ*. It is a tree growing to a great height and found flourishing in most parts of China, yielding a good quality of timber, and the leaves are used to feed silk-worms. The following information concerning it may be considered reliable. It was introduced into Europe by M. D'INCARVILLE, a missionary, in 1751, and is now, amongst other places, seen ornamenting the squares and boulevards of Paris. The prescription for the remedy was obtained a few years ago by Mgr. DELAPLACE, of Peking, from a Chinese family in the neighbourhood, and was used by the missionaries amongst themselves who attest its value. It was afterwards brought under the notice of M. DUGAT of the French Legation, Peking, who prescribed it successfully in two inveterate cases of chronic dysentery. It is now extensively used by MM. DUGAT and BRETSCHNEIDER at the French Hospital, Peking, and highly esteemed by them in particular cases. The bark of the root is used; this is well pounded in a mortar, mixed with a little water until a pulpy consistence is obtained, which properly diluted with more water is the preparation to be given. It has an intensely bitter and astringent taste. We tried this remedy in two cases of severe dysentery last year—both were sailors from a French vessel in port—one was landed (No. 7) on account of his serious condition, but soon afterwards died, being hopelessly exhausted by the long continuance of the disease, and the other left the place, not much improved, a few days after he was first seen. Thus the therapeutical effect of the drug could not well be said to have been observed, nor was this perhaps to be expected under the circumstances.

Whilst on drugs it may perhaps be useful to draw attention to the existence of a substance used by the Chinese for the purpose of curdling bean-curd. It is a strong poison and is sometimes resorted to by women for suicidal purposes. It was first brought to our notice by a comprador who suggested that it might be the poison used in the case of a favourite horse which had been criminally destroyed on the night preceding the day of the races. An analyst in Shanghai who had tested the contents of the animal's stomach said that the corrosive poison used was strong hydrochloric acid, but our informant (who assumes a considerable amount of intuitive scientific knowledge) seemed to think that the substance under notice was probably the stuff used, and styled it "Native hydrochloric acid." Although it will be seen from the following remarks that this was not the case, still we are of opinion that the powerfully toxic agent used by the Chinese should be made known, and we therefore append our observations chemical and physiological. It is called by the

Chinese 油水 lu-shui. First we shall consider the chemical properties. Two specimens were examined. No. 1 gave slight acid reaction with test paper. No. 2 was strongly alkaline. The quantity of solid matter was great, but varied in each specimen, as did also the specific gravity. No. 1 contained alum, to which probably its acid reaction was due. In both the chloride of sodium was largely predominant and triple phosphates were also present. It is one of the productions in the manufacture of saltpetre, which is found in combination with chloride of sodium, impregnating the soil of the coast of the Gulf of Pechili; some localities are distinguished by the white efflorescence which it gives to the surface. This appearance we have observed especially on the borders of Shantung and Chihli, where the saline plains extend for miles inland. The soil is subject to a lixiviating process chiefly for the purpose of obtaining the saltpetre. The poisonous product is the liquid incapable of crystallization in the extracting of the salt.

It is poisonous in doses of from one fluid ounce. Some years ago the Rev. Dr. WILLIAMSON sent us some of what appears to have been the same substance (it was not then particularly examined). A woman in the village of Tingshin had taken a small quantity, and Dr. WILLIAMSON was sent to for aid. He gave an emetic and the patient recovered. She is now alive but complains of occasional attacks of pain in the stomach. We administered it to 5 dogs but the post-mortem appearances were not the same in any two instances. Death appeared to result from shock, but beyond a little unnatural paleness of the œsophagus, and a little congestion of the stomach the appearance of corrosion was not marked, nor could we definitely point to any lesion caused by the poison. The first dog received 1 oz., was immediately under its influence and died in about 5 minutes in convulsions. The other animals were longer in being affected, but the doses given were smaller. In the case of the last dog we administered the poison after it had been evaporated to a solid consistence. In this instance the animal survived several hours, and at the post-mortem the œsophagus and stomach were found considerably congested. In the case of the horse before alluded to the appearances of strong corrosive action were unmistakeable, and thus did not present any similarity to those seen in the dogs.

C.—Dr. RINGER's Report on the Health of Tamsui for the year
ended 31st March, 1874.

THIS port is situated on the N. W. of the island of Formosa, the houses being built on the right bank of the Tamsui River and about a mile from its mouth.

During the Tea season, which comprises all the hot months, the merchants reside for the most part at Twatutia, a settlement about 12 miles up the river, where the tea is brought for sale.

Kelung, the Coal port, on the N. E. side of the island and about 30 miles from Tamsui, forms also a small foreign settlement where the officers of the Customs Staff and one or two other Europeans live.

The foreign community averaged during the past year 18 in number, and the general health was excellent, one or two slight cases of intermittent fever having occurred during the summer which yielded readily to quinine. One case I should however mention which proved more tedious, the patient being unable to regain strength or appetite after the fever, which had continued for several weeks, had passed off, this I think being in part due to the continued repetition of similar food in the hot weather, such as fish and fowls, and the difficulty that exists in obtaining delicacies, there being no sheep here, and the beef, when obtainable, but coarse and tasteless. The patient very soon recovered after change of air and diet.

No severe accidents or deaths have to be recorded.

Diseases amongst the Chinese.—In May 1873, there being no system of medical relief for natives, with the able assistance of the Rev. G. L. MACKAY, I started a dispensary for that purpose to which all the community readily subscribed.

Since the opening and up to March 1874 there have been 640 patients, many of whom came from places 10 miles away. At first several cases of leprosy were seen, but there being no accommodation for them they failed to obtain relief.

The following list will show the principal diseases from which the patients suffered.

| | | | |
|-----------------------------------|-----|-----------------------------|----|
| Diseases of the Eye, | 102 | General debility,..... | 55 |
| Ulcers,..... | 45 | Diseases of the Skin, | 38 |
| Rheumatism, | 42 | Accidents, | 35 |
| Asthma and Bronchitis,..... | 65 | Intermittent Fever, | 20 |
| Dyspepsia and Constipation, | 56 | | |

*D.—Dr. J. H. MACKENZIE's Report on the Health of Ningpo for the year
ended 31st March, 1874.*

I AM glad to say that the year has been a very healthy one as regards foreign residents, there having been no diseases of a serious nature among adults. As will be seen from the subjoined table, diarrhœa and dyspepsia were the most common complaints, the former due perhaps to an over-indulgence in fruits, as it was during the months of June and July, the height of our fruit season, that the greatest number of cases occurred, the latter ascribable often to too free living.

Diseases of Respiratory Organs :—

| | |
|------------------------------------|---|
| Laryngeal catarrh, | 1 |
| Catarrh of air passages, | 5 |

Diseases of Circulatory Organs :—

| | |
|--|---|
| Functional disease of heart, | 1 |
|--|---|

Diseases of Organs of Digestion :—

| | |
|----------------------------|----|
| Thrush, | 3 |
| Gastric catarrh, | 2 |
| Dyspepsia, | 16 |
| Sore throat, | 6 |
| Boils, | 12 |
| Lumbrici, | 4 |
| Hæmorrhoids, | 7 |
| Diarrhœa, | 22 |
| Constipation, | 2 |

Diseases of Liver :—

| | |
|-----------------------|---|
| Cirrhosis, | 1 |
| Congestion, | 5 |

Diseases of Urinary and Generative Organs :—

| | |
|-------------------------------------|---|
| Cystitis, | 1 |
| Gonorrhœa, | 7 |
| Chancre (soft), | 2 |
| Inflammation of prostate, | 1 |

| | |
|---------------------------------|---|
| Stricture of urethra, | 1 |
|---------------------------------|---|

| | |
|-----------------------|---|
| Leucorrhœa, | 2 |
|-----------------------|---|

| | |
|------------------------|---|
| Menorrhagia, | 1 |
|------------------------|---|

Diseases of Nervous System :—

| | |
|----------------------|---|
| Neuralgia, | 2 |
|----------------------|---|

| | |
|---------------------|---|
| Hysteria, | 1 |
|---------------------|---|

Diseases of Skin :—

| | |
|---------------------|---|
| Erythema, | 2 |
|---------------------|---|

| | |
|----------------------|---|
| Urticaria, | 2 |
|----------------------|---|

| | |
|-------------------|---|
| Herpes, | 5 |
|-------------------|---|

Diseases of Organs of Locomotion :—

| | |
|-----------------------|---|
| Rheumatism, | 5 |
|-----------------------|---|

| | |
|-----------------------------|---|
| Fracture of ulna, | 1 |
|-----------------------------|---|

Constitutional Diseases :—

| | |
|--------------------|---|
| Measles, | 1 |
|--------------------|---|

| | |
|-----------------------|---|
| Scarlatina, | 2 |
|-----------------------|---|

| | |
|-------------------------------|---|
| Intermittent fever, | 3 |
|-------------------------------|---|

| | |
|----------------------|---|
| Dysentery, | 7 |
|----------------------|---|

Not Classed :—

| | |
|--|---|
| Wounds, Sprains, Contusions, | 7 |
|--|---|

| | |
|---------------------------|---|
| Abscess—palmar, | 1 |
|---------------------------|---|

| | |
|----------------------|---|
| „ mammary, | 1 |
|----------------------|---|

| | |
|---------------------|---|
| Otorrhœa, | 2 |
|---------------------|---|

Of the seven cases of dysentery four occurred on board vessels in the harbour and soon recovered under the use of ipecacuanha with rest. Of the three cases on shore one was that of a man aged about 35, but the ipecacuanha did not have such a beneficial effect on him as a combination of Dover's powder and grey powder given every four hours, and an injection of starch and landanum every night. The other two attacked were children, and although various medicines were tried everything failed. One child, which always presented a sickly delicate appearance, died on the 16th day of her illness with symptoms of perforation of the bowel. The other, a remarkably strong healthy child, died from sheer exhaustion on the 26th day, apparently suffering little or no pain throughout the course of the disease.

I am informed by the missionaries that during the months of December and January an epidemic of scarlatina and measles of a virulent type raged among the Chinese in the city, and that many of the ill-fed and closely-packed natives fell victims. A little later on some foreigners were attacked but recovery took place in all instances. In my own foreign practice I only saw one case of measles and two of scarlatina.

In the month of August we were threatened by an invasion of cholera from Siam. Accordingly all vessels coming from infected ports were ordered to be put in quarantine till they received a certificate from me that there was no cholera on board. Fortunately for Ningpo only one ship came from an infected port, and when I boarded her the captain informed me that he had been three weeks at sea and that no one on board was, or had been, ill since leaving Siam. The vessel was accordingly permitted to enter the harbour, where she remained for several weeks without a case of sickness occurring on board.

During the past winter, which was a very severe one, the sisters of charity admitted some Chinese into their hospital suffering from frost-bite. In one case both feet had dropped off, leaving the lower ends of the tibia and fibula entirely denuded for about three inches. In another case only about one-half of each foot had been amputated by nature, and in a third case only the toes suffered. I was most anxious to remove the bare bones and useless tissues, but their aversion to the knife of a foreign doctor was too great to overcome, so I was obliged to content myself by applying carbolised oil which soon caused the offensive wounds to cover themselves with healthy granulations.

I cannot conclude this report without mentioning the enthusiasm with which Mr. ALABASTER, H. B. M. Consul, has exerted himself to further drainage and the formation of a bund, both of which are greatly wanted. They will be of great benefit in a sanitary point of view to the settlement, and I trust that in the course of a few months instead of a quagmire we shall have well paved streets to walk on.

E.—The Drs. MANSON's Report on the Health of Amoy for the half year
ended 31st March, 1874.

THE past winter was both to foreigners and natives a healthy one. There were no deaths among the foreign community living on shore, but afloat there were five deaths; viz.:—two cases of abscess of the liver and dysentery, one case of angina pectoris, one case of aneurism of the aorta, and one case of drowning.

Of the cases of abscess of the liver one was contracted in Batavia, the other in Saigon. In one death resulted from exhaustion consequent on excessive dysenteric discharges, in the other from syncope brought on by the patient rising from bed to go to stool.

In this latter case a post-mortem examination was allowed. One large abscess was found in the upper part of the right lobe. The upper surface of the liver was adherent to the diaphragm, and the abscess would, had the patient lived, have opened into the right lung. The physical signs of abscess were not marked, the enlargement was very slight, no bulging and no pain on pressure, yet a history of persistent dysentery, rigors, dull pain, and a temperature ranging in the course of 24 hours from 97° to 104° all pointed to abscess of the liver. The aspirator was not employed, yet we think that with constitutional symptoms so pronounced it should have been, even in the absence of all physical signs.

The subject of the aneurism came under our care four days before his death, suffering from intense dyspnoea due to congestion of the lungs. The chest was uniformly dull, there was marked turgidity of the veins of the neck on both sides, and a peculiar croupy cough. Patient stated that he had suffered from *rheumatic* pains in the right arm, and from pleurisy for which he had been freely blistered. At the post-mortem examination an aneurism of the ascending aorta of the shape and size of a very large orange was found pressing against the sternum in front and compressing the great vessels at the roots of the lungs. Death was caused by congestion of the lungs owing to the pressure on the vessels. The aortic and cardiac valves were healthy, as well as the kidneys and other organs.

The patient, a middle aged man, had been for a long time accustomed to partake freely of alcoholic stimulants. The nature of his occupation was such as to cause him almost constant anxiety.

From the 1st October to the 31st March, the crews of 70 vessels came under our observation. The crews consisted of 566 Europeans and Americans, 183 Chinese, 130 Malays and 25 Japanese. The average stay of each vessel in port was about 14 days. Coasting steamers are not included.

LIST of Cases occurring among the floating population from 1st October 1873 to 31st March 1874.

1.—*Miasmatic Diseases* :—

- 3 cases of febricula.
- 9 " " intermittent fever.

2.—*Enthetic Diseases* :—

- 19 cases of gonorrhœa.
- 10 " " primary venereal sore.
- 8 " " constitutional syphilis.
- 3 " " bubo.

3.—*Diseases of the Digestive Organs* :—

- 10 cases of diarrhœa.
- 1 " " dysentery.
- 2 " " abscess of liver and dysentery.
- 3 " " dyspepsia.
- 1 " " jaundice.
- 6 " " caries of teeth.
- 1 " " piles.

4.—*Diseases of the Circulatory and Respiratory**Organs :—*

- 4 cases of bronchitis.
- 2 " " phthisis.
- 1 " " angina pectoris.
- 1 " " aneurism of aorta.

5.—*Diathetic Diseases :—*

- 10 cases of subacute rheumatism.

6.—*Diseases of the Generative Organs :—*

- 2 cases of stricture of urethra.
- 1 " " paraphimosis.

7.—*Diseases of the Integuments :—*

- 3 cases of ringworm.
- 3 " " boils.
- 2 " " ulcer of the leg.
- 4 " " chloasma.
- 2 " " eczema.
- 1 " " urticaria.
- 3 " " itch.

8.—*Diseases of the Eye :—*

- 2 cases of conjunctivitis.
- 1 " " ulcer of cornea.

9.—*Accidents :—*

- 7 cases of bruise.
- 2 " " sprain.
- 3 " " incised wound.
- 2 " " fracture of the femur.
- 1 " " dislocation of shoulder.
- 1 " " dislocation of hip-joint.
- 1 " " drowning.

10.—*Other Diseases :—*

- 5 cases of whitlow.
- 1 " " neuralgia.
- 1 " " synovitis.
- 2 " " frost-bite.
- 1 " " tapeworm.
- 2 " " ebriositas.

The following case came under our observation towards the end of March. A naturalist who for some months had been engaged in travelling in Formosa happened to mention incidentally in the course of conversation that he had lately been troubled with frequent epistaxis, pain in the head and other symptoms pointing to some anomalous condition of his nose. Through a speculum we could see a dark shining body far up in the nose, and just as the speculum was being withdrawn the head of a leech was protruded between the blades of the instrument and quickly retracted. An artery forceps was introduced into the nostril and after one or two attempts was fastened on the head of the animal as it was protruded. Allowing the forceps thus attached to dangle from the nose while some salt and water was injected, the leech, after a short time, relaxed its hold and fell into the hands of the astonished naturalist. The following is the written account he gave of his acquaintance with this strange parasite:—

On the trip to Bankintang, during the Chinese New Year, on the way to the savage village, BUDD of Boyd and Co.'s and I drank from a pool in which we noticed small leeches about half an inch in length, and I afterwards picked two or three of them from the roof of my mouth. Some six or eight days afterwards I was troubled with bleeding from the right nostril and afterwards with considerable pain on that side of the nose. I have seen something protruding several times.

(Signed)

I. B. STEERE.

For some time before the leech was extracted Mr. STEERE suffered from pain in the head, vertigo and loss of appetite. He lost flesh considerably. All his symptoms he attributed to severe "cold in the head."

The leech measures about $1\frac{1}{2}$ inch in length, is of a uniform dark chocolate colour, and is furnished with a very large sucker—in other respects it is like the ordinary *hirudo medicinalis*.

Some time ago we heard of a gentleman residing in Tamsui having been afflicted in a similar manner, every now and then the head of the animal would be protruded from the nostril and wander about after the manner of leeches over his lip and nose. It was very fond of water and its owner could generally cause it to protrude by dipping his face into a basin of water.

In Takow, Formosa, we have on two occasions seen what we now know must have been this parasite in the nostrils of monkeys. At the time we thought it was a form of polypus. Sometimes when the animal was sitting quietly, a long dark fleshy body would come out of the nostril, but the movements of the monkey on our making any attempt at a close inspection immediately caused the protruded object to retract.

There can be little doubt that this parasite is derived from drinking water, probably creeping round the velum into the posterior nares or by the anterior nares, especially when stooping down to drink from a pool.

The operation for elephantiasis of the scrotum described in the Medical Reports for the half year ended 31st March 1872, pp. 27-33, we still practice, and, with an experience of 31 cases without a single death or serious mishap, we can confidently recommend it. Some improvements in the details of the operation have been introduced. For instance, to dispense with unnecessary and often unintelligent and unreliable assistance in keeping the legs in position, we have devised and use a table to the legs of which at the high end two foot pieces are attached and also two upright poles; to these the feet and legs are firmly secured and thus a convenient position is obtained, while two assistants, often much in the way, are dispensed with. Again, the earlier operations were frequently interrupted and delayed by the patient's body—owing to the great incline on which it lay—slipping away down the table. Now this is obviated by straps passing over the shoulders and fastening them to the table in such a way that the sliding is prevented while respiration is not at all interfered with.

Prior to operation the tumour, if a large one, cannot be suspended too long. The amount of diminution and softening it undergoes during a suspension of two or three days is marvellous. From being hard, tense and unyielding, it becomes soft and pliant, allowing of the easy discovery of the situation of the testicles, and a dissection comparatively unimpeded by a large flow of venous blood.

We would again insist on the necessity of lowering the shoulders of the patient as much as practicable; of making the earlier dissections for the testicles and penis deliberately and with as little cutting as possible, and of prolonged suspension of the tumour, if large, before operation. With these precautions this, though a formidable, is a very safe operation.

There is often a partial return of elephantiasis, not in the cicatrix but in the skin which at the time of operation was supposed to be sound, but as far as we have seen it seldom amounts to more than a slight thickening. Only in one case, No. 8 of the first series of operations reported on, was there serious relapse. In this case the original tumour was very large, 51 lbs., the base was very extensive, but the disease appeared at the time to have been quite removed by the operation; 18 months afterwards, however, we saw him again and then the integument of all the lower part of the abdominal wall was much thickened and diseased; the situation was such and the disease so extensive that no second operation would have been justifiable, especially as the man suffered but comparatively little inconvenience.

In continuation of the series we give short notes of some subsequent cases.

11.—TOKSIEN; æt. 52; native of Tching-kang; is a joss-paper burner; lives on rice, potatoes, salt fish and vegetables. His family is a healthy one, and himself too, he says, enjoyed excellent health until he was 45 years of age. At that time he had an attack of tertian ague, and again every autumn in his 46th 47th and 48th years. About this time a gland in the left groin swelled and inflamed and was very painful, especially at night. This occurred again and again, coming on every few weeks with the ague.

When he came to the hospital he was stout and in good condition. The inguinal glands were much enlarged. Quinine and beef were given as preparatory treatment for five days, and then the scrotal tumour was removed; it weighed 13½ lbs. Both testicles and the penis were preserved. The patient returned home, almost well, on the 24th day from the operation.

12.—TIM-LAI; æt. 46; Lamo, Tsa-ia; a field labourer, living on sweet potatoes, a little rice and salt fish and vegetables. His younger brother has elephantiasis of the leg. Previous to his 28th year he was very healthy, then he had an attack of ague (during winter) soon complicated by pain and swelling of the left inguinal glands and swelling of the leg. The inflammation seems from his description to have crept down the lymphatics. This fever and inflammation lasted, he says, four days and left some swelling of the leg. At the end of these four days the skin of the scrotum, which had not been affected before, began to thicken without any pain, redness or sign of inflammation. After this first attack ague recurred every three or four months, and every time was accompanied by pain and swelling of the left inguinal glands, and followed by swelling

of the leg and scrotum; this went on for four years. At 32 the scrotum ceased to swell, but the leg continued enlarging; at 40 the disease in the scrotum increased, while that in the leg remained stationary. He still had fever every few months, and once a large abscess formed in the lower part of the scrotum, which on being opened by a Chinese doctor discharged about 40 ounces of dark stinking pus. From the time of the formation of this abscess the enlargement of the scrotum progressed more rapidly.

The swelling in this case is peculiar, the prepuce attaining an enormous development.

After removal the tumour weighed 8 lbs. Penis and both testicles preserved. The patient recovered without a single bad symptom.

13.—TIN-RHUI; æt. 41; Lamo, Nia-tan; a field labourer, miserably poor, living on a diet confined to potatoes and salted vegetables. His parents died when he was a child; his elder brother suffers from a bad ulcer of the leg, his younger brother from rheumatism and favus. When 10 years of age he had a quotidian ague which recurred every subsequent winter, the attacks lasting 10 or 15 days. Gradually he became much debilitated though the spleen did not enlarge. For 10 years, from 20 to 30, he vomited large numbers of lumbrici. When 34 years of age the ague grew much worse, lasting for longer periods, a month or more at a time, and the inguinal glands on the left side and the lymphatics of the corresponding leg inflamed; this attack of inflammation lasted for about 10 days. From that time the scrotum gradually enlarged, the ague became more frequent, the enlargement of the scrotum being much accelerated by each attack of fever.

On admission the patient appeared very anæmic and feeble, but improved on more generous diet and quinine. He was operated on 8 days afterwards and a tumour weighing 10 lbs. was removed. During the operation a large hydrocele was opened on the left side and redundant tunica vaginalis excised. Though the bleeding was very considerable the patient made a rapid recovery, great part of the wound healing by first intention. The penis and both testicles were preserved.

14.—TOLIEU; æt. 34; a fishmonger, living in Amoy, in comfortable circumstances. His mother has elephantiasis of the left leg, though otherwise she is a healthy woman, but his father appears to have suffered from contraction of the flexors of the left leg, and when Tolieu was 16 years of age died of consumption.

The patient states that when 24 years of age he drank a great deal of wine one night and slept in the open air on the deck of a cargo boat. To this circumstance he attributes an inflammation of the scrotum and inguinal glands and testicle of the left side, which showed itself next day, at the same time he had fever for 2 or 3 days. After this, attacks of fever and swelling of the scrotum recurred every 10 or 20 days. A native doctor ascribed his disease to "lieng phi" and treated him with deer's horns infused in wine, and other medicines, but the disease continued to increase, the penis became buried in the swelling, and micturition became difficult. Last year the disease made still more rapid progress and the tumour got so large as to prevent locomotion.

The patient was a large flabby man of unpromising appearance for operation. After preliminary treatment a scrotum weighing 31 lbs. was removed, penis and testicles being preserved. The case did well and he returned home after about a month. Subsequently one or two abscesses formed about the testicles and flaps, these were opened and healed kindly. A year after the operation, though there is a little thickening of the flaps, he continues in excellent health and moves about his business a useful member of society.

15.—TCHOAK SOON; æt. 36; a native of Amoy, Tiek-phi; a field labourer, living on the ordinary diet. His mother died, he says, of asthma; no family sickness.

When a little over 10 years of age he became very liable to attacks of ague and bleeding piles. The ague occurred at irregular intervals. When 29 years of age, the left side of his scrotum inflamed and suppurated. The following year the right side of the scrotum was similarly affected. From that time the skin of the scrotum gradually swelled and thickened; he had ague three or four times every year and with each attack of ague the swelling of the scrotum was accelerated.

After four days preparatory treatment a scrotum weighing 4 lbs. was removed. He recovered favourably and returned home a month after operation.

16.—TAN-IAM; æt. 41; native of Lamoā, Tchīn-soa; lives on a meagre potato diet and is very poor; works as a field labourer.

When a child he was liable during 6 or 7 years to attacks of asthma. When 29 years of age had an ague and inflammation of the scrotum and left inguinal glands. As the fever left him the local pain and swelling diminished, the reduction in size being accompanied by desquamation and intense itching of the scrotum. Since then he has had similar attacks twice each year. Gradually the swelling of the scrotum and prepuce, especially the latter, increased.

After 7 days preparation a scrotum and prepuce weighing 3 lbs. were removed. The patient made a good recovery.

17.—TSONG-PHI; æt. 45; native of Tchian-an; a baker; his father and a younger brother died of phthisis.

Until 24 or 25 years of age he enjoyed good health. He then contracted a gonorrhœa, in consequence of which he has still a considerable urethral discharge. At 30 he had a slight attack of ague. At 36 the ague reappeared along with inflammation of inguinal glands. From this time the lower part of the scrotum began to enlarge, the swelling increasing more rapidly when his ague is on him, usually four times every year.

Though the tumour had a constricted neck, and in consequence hung very low, the base was broad. After removal it weighed 14 lbs. Patient recovered perfectly.

18.—NNG-POO; æt. 35; Tchīn-kang, Pho-kio; a tobacconist, lives on common food. Father died of fever, mother was murdered.

He enjoyed good health until 23 years of age when he had an attack of ague in the spring. Afterwards he had no return of the ague, but the scrotum, without pain, enlargement of the lymphatics or fever, gradually swelled to an enormous size.

He made a favourable recovery after the removal of a mass weighing 31 lbs.

19.—ANG-JIN-CHIET; æt. 35; native of Tchīn-po Tho-jin; a field labourer. Father was killed, his mother died of phthisis.

When over 10 years of age had an ague every year; when 29 years of age one attack lasted for about four months; he had recovered from this about 15 days when the left inguinal glands inflamed and the fever relapsed. The glands were very painful and confined him to bed for three months. After this the glands decreased in size but the skin of the scrotum gradually thickened. In March and July last had again attacks of fever and inflamed glands, each attack lasting for about a month and accelerating the enlargement of the scrotum very much.

The tumour had a very narrow neck. After eight days preparatory treatment it was removed, and weighed 8 lbs. There was a considerable hydrocele on the left side, and in consequence of want of flap this testicle had to be left uncovered to cicatrise over, which it did, though rather slowly.

20.—TIN-KIM-KAM; æt. 26; native of Oon-sio, E-tao; a field labourer, living on potatoes, rice and salted vegetables. His father was killed by the Taipings, his mother and a brother died of phthisis.

Enjoyed good health till 23 years of age, when in the summer he was attacked with swelling of the left testicle (?) which gradually enlarged without pain. After a short time the left inguinal glands enlarged and became slightly painful. Since then he has had many attacks of inflammation of the left inguinal glands, and after each attack the scrotal swelling increases in an advancing ratio.

After five days of preparatory treatment 4 lbs. of scrotum were removed. He had a very large hydrocele on the left side. Recovered favourably.

21.—SIM-ONG; æt. 43; native of Tchian-an, Khoe-lam; a field labourer, living on rice, potatoes and salted vegetables. His father died of phthisis, his mother of fever.

When 14 years old he had a large abscess in his neck; when 15 a quotidian ague began, which after a time became tertian and lasted for 3 years. When 31 his scrotum and right inguinal glands inflamed, swelled and became painful; these symptoms subsided after a time, but recurred in a more severe form about 5 months afterwards and confined him to bed for 3 months; an abscess formed in the right side of

the scrotum and discharged a very large amount of pus. From that time he has had two attacks of fever every month accompanied by inflammation of the scrotum and right inguinal glands, gradually adding to the size of the enlarging scrotum.

The tumour reached to the knees, but on removal weighed 6 lbs only. Patient recovered favourably.

22.—PHO-HO-IN; æt. 36; native of Amoy; a joss-paper maker, living on rice and vegetables. His father and mother both died of coughs.

Since childhood has been troubled with itch. At 16 or 17 had what he describes as swelling of the right testicle and after a time of the left also. At 26 one night during sleep was suddenly attacked with shivering, and after this his inguinal glands on both sides inflamed for about 5 days; gradually the scrotum enlarged. Every year he had one or two aguish attacks accompanied by inflammation of the scrotum and glands, each attack adding to the rapidity of the enlargement of the scrotum.

Without any preparatory treatment the scrotum was removed. It weighed 6 lbs. and contained two large hydroceles. He made a good recovery.

23.—TAN-TSUI-SENG; æt. 32; Thian-an, Khoe-lam; a field labourer, living on rice, potatoes, salted fish and vegetables.

At 16 had an ague for about 15 days; when 20 his scrotum inflamed and kept so for over 10 days; he recovered from this to relapse again with fever; from that time the scrotum has gradually enlarged without further attacks of fever.

The scrotum was removed and weighed 8½ lbs. Both sides had hydrocele. Made a good recovery.

24.—THO-SAE-KANG; æt. 31; a native of Tchianan, Sa-tchap-tho; a field labourer, living on rice, potatoes and salted vegetables.

When 15 years of age had an ague for three months; when 20 had a similar attack for five months; afterwards during a fever attack the scrotum and inguinal glands inflamed for five or six days; from that time the scrotum has gradually enlarged. His fever returns at irregular intervals and is accompanied by scrotal and inguinal inflammation.

After four days preliminary treatment a scrotum weighing 16 lbs. was removed. Before the operation he informed us that his right testicle had never descended, and though carefully looked for no trace of it or the cord could be found during the operation or afterwards in the tumour. The left testicle was affected with hydrocele. Made a favourable recovery.

25.—TIM-JEE; æt. 42; Tchianan; a field labourer, living on rice, potatoes, salt fish and vegetables. His father and mother died of fever; he himself, with the exception of an attack of vomiting of blood and the scrotal disease, has always enjoyed good health.

When 31 years of age the skin of the penis gradually thickened but without fever or inflammation; the thickening spread to the scrotum. Four months before his coming to hospital the progress of the swelling became more rapid than formerly. After a short preparatory treatment a scrotum weighing 2½ lbs. was removed. Penis and both testicles were preserved and he made a good recovery.

26.—SIM-KEK; æt. 38; Tchianan; a pedlar, living on rice, potatoes, salt fish and vegetables. Parents dead.

Enjoyed good health till his 28th summer when he had a short ague attack. After this had yearly attacks of fever. At 34, during an ague attack, his scrotum began to swell, but without inflammation. The enlargement continuing, he came to the hospital and had about a pound weight of diseased tissue removed and recovered favourably.

27.—TIN-TSOAN; æt. 50; Tin-sa; a field labourer, living on ordinary diet. His parents died young.

When only 11 years of age had an attack of ague which recurred when he was 20, the latter attack being accompanied by inflammation of the scrotum and inguinal glands, this lasted for almost 20 days and afterwards the scrotum gradually enlarged. When 46, although the ague did not recur, the swelling increased very rapidly.

A scrotum weighing about 30 lbs. was removed. The left testicle was atrophied and had a hydrocele and cartilaginous tunica vaginalis and was therefore removed. The right gland was healthy although it had a large hydrocele containing upwards of 20 ounces of fluid. He made a good recovery.

28.—THO-KANG; æt. 16; Tchianan; a field labourer, living on common food. Eight months after birth swelling of the prepuce began spreading, he was told, from a small red spot on it without pain or inconvenience.

On admission the prepuce and scrotum were found to be considerably thickened; these to the extent of 4 ounces were removed and he recovered favourably.

29.—TIM-PI; æt. 43; Amoy; a field labourer, living on ordinary food. His father died of consumption.

He enjoyed good health until his 22nd year when he spat blood several times; in his 24th year the skin of the penis became thickened and tuberculated, gradually increasing in size. At 33 he had ague and inflammation of inguinal glands and scrotum lasting for four days; from this time the scrotum gradually enlarged and every year he had attacks of fever and scrotal inflammation.

The prepuce was enormously enlarged, being at least 6 inches long by $2\frac{1}{2}$ inches broad; the scrotum reached to the knees. Both testicles had hydroceles. After removal the diseased mass weighed 36 lbs. Recovered favourably.

30.—TIN-JEOK; æt. 28; Tehvan-tchin; a pedlar, living on common food.

When 12 years old he had an attack of fever lasting for about 10 days. At 19 passed by urethra blood and pus (gonorrhœa?) and had inflammation of the left testicle and inguinal glands; the pain from this soon subsided, but the scrotum gradually enlarged and he had yearly attacks of ague and inflammation.

The prepuce and scrotum were removed; part of the sheath of the penis appearing healthy was left. Diseased tissue removed weighed but a few ounces. Did well.

31.—TSNG-IN; æt. 33; Amoy; a silk merchant, living on ordinary food. Parents died young.

At 10 had an ague, and again at 28 with inflammation of the scrotum and inguinal glands. Afterwards fever frequently recurred with inflammation and gradually increasing swelling of the scrotum.

A scrotum weighing 5 lbs. was removed. Both testicles had hydroceles. Case doing well.

F.—Dr. Alexander JAMIESON's Report on the Health of Shanghai for the
half year ended 31st March, 1874.

For the following meteorological table, with the observations which accompany it, I am indebted to
Mr. C. DEIGHTON-BRAYSHER, Assistant Harbour Master.

| MONTHS. | HIGHEST RANGE OF BAROMETER. | | LOWEST RANGE OF BAROMETER. | | THERMOMETER IN THE SHADE. | | HOURS OF RAIN. | NUMBER OF GALES. | PREVAILING WINDS. |
|---------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|------|----------------------|------------------------|----------------------|
| | Barometer. | Attached Ther- mometer. | Barometer. | Attached Ther- mometer. | MAX. | MIN. | | | |
| | in. | ° | in. | ° | ° | ° | | | |
| October,..... 1873, | 30.360 | 54 | 29.950 | 68 | 76.5 | 46.0 | 35 | 1 | N.E., N.W. |
| November, " | 30.502 | 56 | 30.054 | 57 | 72.5 | 34.0 | 2 | 1 | Variable. |
| December,..... " | 30.603 | 46 | 30.000 | 54 | 66.0 | 32.0 | 57 | 1 | S.W., N.W., |
| January,..... 1874, | 30.653 | 33 | 30.200 | 48 | 56.0 | 18.5 | 26 | 1 | N.E. |
| February, " | 30.600 | 40 | 30.050 | 45 | 53.0 | 29.0 | 95 | 0 | N.W. |
| March, " | 30.600 | 47 | 30.050 | 55 | 71.5 | 32.5 | 200 | 4 | N.N.E. |

The instrument from which the barometrical observations were taken is a FORTIN'S standard of $\frac{5}{16}$ inch bore,
No. 287. It is placed about 16 feet above the level of the river.

The rise during the highest spring tides at this port is from 11 feet 6 inches to 12 feet.

LAST QUARTER OF 1873.

Barometer.—The maximum of 30.603 inches in December was higher than any reading during the last quarter of any year since 1866, with the exception of 1871 and 1872. The minimum of 30 inches in December was identical with the minimum of December 1868.

Thermometer.—The maximum temperature, 76°.5 F., in October was lower than the maxima of the months of October, 1867, 1870, 1871 and 1872, and the minimum 32°.0 in December was higher than that of any December since 1866 with the exception of 1869.

Rain.—Omitting the years 1871 and 1872, less rain fell in 1873 than in any other year since 1866, and 2 hours rain-fall in November was the least recorded in any month during the seven years.

Gales.—The gales in the last quarter of 1873 were few in number compared with the last quarter of 1867, 1868, 1869, 1870 and 1871.

Winds.—The prevailing winds for corresponding months may be said to be nearly the same every year, but the light and variable airs of November 1873 were exceptional.

FIRST QUARTER OF 1874.

Barometer.—The barometrical reading of 30.653 inches in the month of January was lower than those in the same month of 1871, 1872 and 1873, though higher than the rise of 1867, 1868, 1869 and 1870. The minimum of 30.050 inches was higher than the minimum of any year since 1866 for the same period.

Thermometer.—71°.5 F. was the maximum for the first quarter of the years 1868, 1869, 1871 and 1873, and the minimum of 18°.5 F. in the month of January was the absolute minimum for the past seven years.

Rain.—321 hours rain in the first quarter of 1874 was the greatest fall for similar seasons since the year 1866.

Gales.—5 in January, February and March nearly correspond with other years in same period.

Prevailing Winds.—Strong winds were unusually frequent in March, and were mostly from the N.E.

During the last three months of 1873 there was an unusual amount of sickness, apparently due to frequent and sudden changes of temperature. Acute dysentery, acute diarrhœa, remittent and intermittent fevers, typhoid and rheumatism were of frequent occurrence, while minor ailments such as neuralgia, lumbago, catarrh, sore throat, &c., were daily brought under observation. No small-pox was reported among foreigners, until the 29th December. On the 26th October the first case of scarlet fever ever observed in Shanghai occurred and proved fatal in twelve hours after the disease declared itself. The patient was a child brought from Chefoo during the stage of incubation. The case is fully reported on a subsequent page. The most stringent measures were adopted for isolating all the persons who had come into contact with the infection, and the disease fortunately did not spread. Several cases of abscess of the liver occurred. In one instance—that of a tidewaiter in the Customs—the liver affection was consecutive to acute dysentery. The abscess was opened externally, but within a few days, the inflammatory process going on, a communication was effected between the cavity of the abscess and the right hepatic vein, and the patient died. This case is reported at length in the last volume of these Reports, page 64. Catarrhal affections chiefly prevailed during the first quarter of 1874, and in addition several severe cases of typhoid fever and of small-pox and many of dysentery presented themselves. A few deaths from typhoid and a few from small-pox occurred. The dysentery observed was of a mild type. Whooping cough attacked several children, but hardly to such an extent as to justify its being represented as epidemic. A true epidemic of varicella (chicken-pox) passed, however, over the settlement in February.

The register of the General Hospital shows 140 admissions of Europeans during the six months. Of these 26 were for various venereal affections, not including rheumatism or cerebral disease; 12 were for phthisis; 3 for suppurative hepatitis; 11 for dysentery; 12 for enteric fever; 3 for heart disease; 6 for intermittent fever, and 6 for small-pox. Of the latter, the first case was observed on the 29th December, and the subsequent cases were admitted respectively on the 8th and 22nd January; 2nd, 21st and 23rd March. One Manilaman, not included in the 140 admissions noted above, died of small-pox on the 28th March, after a stay of one week in hospital. The deaths out of the 140 admissions of Europeans were 21, distributed as follows:—

CAUSES OF DEATH AMONG EUROPEANS ADMITTED TO THE GENERAL HOSPITAL DURING THE SIX MONTHS.

| | | | | | |
|--------------------------|----------|-------------------------|---------|------------------|----------|
| Phthisis, | 2 deaths | Diarrhœa, | 1 death | Dysentery, | 5 deaths |
| Suppurative Hepatitis, 3 | „ | Enteric Fever, | 2 „ | Syphilis, | 2 „ |
| Heart Disease, | 2 „ | Pulmonary Congestion, 1 | „ | Small-pox, | 2 „ |
| Meningitis, | 1 „ | | | | |

It will be seen that typhoid fever and dysentery continue to be endemic, and there appears to be good reason for assuming that the water used in the settlements is a main cause of both. No attempt has yet been made to obtain a supply of pure water on a large scale. The filtered water sold by the Pootung company, chiefly to the shipping, shows a great improvement upon the water in ordinary domestic use, but the small quantity at present obtainable by shore residents has had no appreciable effect in improving the general character of the water consumed. Like that of the little town “not to be mentioned in verse,” which HORACE visited on his way from Rome to Brundisium, the water of Shanghai is “the filthiest in the world.”* It is a just subject for astonishment that while the members of the Shanghai community, regard being had to their intelligence and varied information, doubtless accept the received doctrine of the non-specificity of dysentery, and the well supported doctrine of the non-specificity of typhoid, they make no effort to provide what in all civilised countries is regarded as the most fundamental hygienic requirement. “It is,” says SIMON, (*Memorandum on Disinfection*) “to cleanliness, ventilation and drainage, and the use of perfectly pure “drinking water, that populations ought mainly to look for safety against nuisance and infection.” That

* Venit vilissima rerum

Hic aqua.

Sat. i. 5, 88.

lack of money does not cause this neglect is proved by the expenditure of vast sums upon the stately edifices which are yearly becoming more numerous in all parts of the settlements, and that lack of public spirit is equally free from blame is shewn by the Wusung railway undertaking which is obviously a pure enterprise not holding out the smallest hope of a direct return. Were capital devoted to the formation of a water works company, the money invested would prove at least as productive as it now does when directed into either of the channels just mentioned.

Pending the establishment of water works, public attention may advantageously be drawn to a means of purifying and storing water which is now adopted in the largest ships of the English navy, and is equally suitable for shore purposes. Tanks are provided, constructed upon a plan introduced in 1872 by Captain CREASE of the Royal Marine Artillery. The filthiest water is rendered clear, inodorous and tasteless in a few minutes, and the construction of the apparatus is of the simplest and most inexpensive character. In brief the method is as follows:—Within a large tank a smaller one is fixed, the former destined to be filled with unfiltered water, the latter to receive the filtered water. Each tank has a false bottom consisting of two perforated plates between which is placed coarsely powdered animal charcoal which, by screwing the plates together, can be packed as tightly as may be necessary. Beneath this false bottom there is free communication between the tanks. But in order to get from the first reservoir to the second the water must descend through one stratum of charcoal, and ascend through another. By unscrewing a few nuts access is gained to both compartments so that whenever it is necessary the charcoal can be removed and washed or reburnt. The filters are manufactured by BELLAMY & Co., Byng Street, Millwall, E., and a diagram with full explanation of the process is to be found in the *Lancet*, vol. ii. of 1872, page 821. It would seem that for domestic requirements these filters leave nothing to be desired, and I think it very probable that the principle of their construction might be successfully applied upon a large scale.

Both directly and indirectly connected with the question of water supply, the milk supply claims attention. Doubtless the milk obtained in sealed bottles from the foreign dairies is above suspicion so far as intended sophistication is concerned. I am satisfied, however, that the amount of milk purchased from natives is largely in excess of that supplied by foreigners. It is so certainly true that it is hardly uncharitable to assert, that the stagnant pool nearest to each native dairy subscribes largely to the milk pails taken into the bottling room. The water of every pool and creek round Shanghai is swarming with organisms, and however little we know about the real nature of these organisms, this at least we do know with absolute certainty, that when ingested by human beings they are liable to produce diseases of more or less severity which may have and often do have a fatal termination. Apart from this consideration, it is reasonable to suppose that animals whose supply of water is drawn from sources so contaminated will suffer, that certain pathological states will be developed in them, that their secretions (including of course their milk) will be vitiated, that the organisms ingested will multiply in their bodies and be given off in the same or allied forms in their secretions (again including their milk) and that the consumers of such milk will suffer in the same way as if they had absorbed the organisms at first hand, or in a way similar to it. This I say, is at least reasonable, but were it a pure hypothesis, I would not here bring it forward. Recollecting the condition of the pools scattered through the grazing grounds of the settlement, the following extract from a paper by Dr. OGLE in the *Lancet* of the 11th October, 1873, page 518, will place in a stronger light than I can bring to bear on the subject, the dangers we run from the succession of occurrences I have briefly sketched:—

Mr. X. A. WILLARD, of Herkimer, New York, lecturer in Cornell University, * * * describes in detail the liability of milk, as discovered in Mr. BORDEN's earlier experiments, and also according to the experience of the present day, to a "peculiarly bad behaviour," "refusing to be controlled," in spite of all due care and caution as regards cleanliness, a point which, in the manufacture of condensed milk, has especially to be attended to, as the success of the condensing factory depends entirely on the milk being fine-flavoured, and clean and healthy, free from drippings of the stable, &c., and he alludes to investigations of HALLIER and PASTEUR on the change in milk wrought by living organisms, as from cesspools, decomposing and putrid animal matter, &c. He then quotes from Professor CALDWELL who speaks of the germs of fungi thrown off from putrefying matter being mixed with the air, and thus inhaled by cattle

whose milk becomes in consequence infected before it leaves the bag.* He afterwards alludes to the discovery by Mr. FOSTER of Oneida that milk from cows which inhaled bad odours and emanations from decaying animal remains was rendered unfit for making cheese; and not only was the milk from the cows which inhaled the odour unfit for cheese-making, but also the milk from a large number of other cows which had been mingled with the former in the cheese-factory vats. He speaks of numerous cases where milk was tainted from the cows having passed through sloughs of decomposing vegetable matter, the particles of dirt which adhere to the udders and other parts of the animal falling into the milk during the process of milking, and introducing germs which quickly decompose and putrefy good healthy milk. He mentions instances illustrating this, and describes the trouble which happened in the case of a large factory supplied by numerous farms or milk walks, in one only of which it was found that the cows were allowed to cross a narrow slough where particles of mud adhered to the udder. But the facts which I particularly wished to quote are the following. They happened in the experience of Professor LAW of Cornell University, who obtains his supply of milk from a "milkman":—

One day during the hot weather he observed a peculiar ropy appearance in the cream which had risen on the milk. He examined it under the microscope, and found it filled with living organisms of a character quite foreign to good milk. He immediately called upon his milkman to enquire concerning his management of stock and general treatment of milk with a view of accounting for the trouble. There was no fault discovered at the dairy, in the milking or in the treatment of the milk; but on looking through the pastures, he found that the cows for lack of clean running water, were compelled to slake their thirst for the most part from a stagnant pool. This water he examined under the microscope, and discovered in it the same class of organisms as those in the cream. He then took some of the blood from the cows and examined it under the microscope, when the same organisms made their appearance. He next obtained a specimen of good milk—milk which on examination was free from impurities—and into this he put a drop of water from the stagnant pool. In a short space of time the milk developed an infinite number of these living organisms, and became similar in character to the milk obtained from his milkman. He examined the cows, and made the usual thermometric tests for determining health and disease in animals. The cows were found to be hot and feverish, thus evidently shewing that the organisms entering the circulation had affected the health of the animals. (*Journal of the Royal Agricultural Society of England*, 1872.)

The above facts are cited to shew that bad milk may arise independently of want of cleanliness in dairy utensils; and, assuming that all care was taken in conducting the observation, they seem to teach us that at the present time more attention should be given to the aforementioned source of impurity of milk than has been accorded to it.

It was noted (*Customs Medical Reports*, No. 3, p. 85) as a coincidence that at the time of the discovery of murrain among the horned cattle in the settlements dysentery of marked severity occurred among foreign children. But the propagation of enteric fever by the agency of milk does not rest for proof on either coincidences or surmises. TAYLOR in 1858 (*Ed. Med. Journal* for June), BALLARD in 1870 (*Med. Times and Gazette* for Nov. 26), ROBINSON in 1872 (*Report on the Sanitary Condition of Leeds*), JENNER, MURCHISON and RADCLIFFE in 1873 ("Outbreak of typhoid fever in Marylebone" in *Lancet* vol. ii. for 1873, pp. 245, 267) have abundantly proved the causal relation between impure milk and epidemic typhoid. The fact that typhoid is endemic in Shanghai should suffice to impart serious weight to these considerations. It is well to recollect that boiling is necessarily destructive to the organisms here in question.

It will be gathered from the burial returns on the next page that out of 31 certified deaths among adults during the six months, 5 were due to aneurism. Of these all occurred in males, 3 are described as thoracic aortic (in one, although there was an aortic aneurism, it was the rupture of another, situated in the left pulmonary artery, that caused death), 1 is noted as aortic, and in the remaining case the locality is not mentioned. The ages of the sufferers were 43, 38, 38, 38 and 36. That senile decay in its ordinary sense has nothing to do with the prevalence of aneurism in Shanghai is clear, but it is equally clear that in a considerable number of foreign residents there exists that degeneration of the tissues which is so often associated with advanced life as to be included among its common phenomena, and to acquire a name from it. It would seem as though here the term "age" ought not to be used arbitrarily in relation to the number of years which a man has spent in the world. For my own part I do not now even hazard a guess as to the

* "As an illustration of the effects of inhaling air containing putrid matter, I may mention that when I was curator of the St. George's Hospital Museum, the man who had to cover the preparations with bladder, which was used when in a state of commencing putridity, invariably at that time became subject to diarrhoea, and the fœces and the flatus from the bowels and from the stomach always had the same peculiar offensive smell which the putrid bladder possessed."

cause of this striking prevalence of arterial disease in Shanghai. It is noteworthy that out of 5,774 patients treated in the Government Civil Hospital, Seaman's Hospital, and Gaol at Hongkong between the years 1867 and 1873 inclusive, there were only 4 cases of aneurism registered. What the significance of this immunity in another part of China may be, I am equally at a loss to determine. That aneurism does not enter prominently into Indian nosological records I assume from the fact that no notice is given of its prevalence, in the invaluable reports issued annually by the Sanitary Commissioner with the Government of India. This and the figures just cited from the Hongkong returns would seem to exclude climatic causes, yet when once we have eliminated the influence of age and that of climate we have nothing to fall back upon but personal habits and pursuits, which are useless for purposes of explanation, inasmuch as the disease declares itself in men of all sorts of habits and in all conditions of life.

During the half year there were, as far as I can gather from the Burial returns and the General Hospital records, 44 deaths, distributed as follows through the months:—

BURIAL RETURN OF EUROPEANS FOR THE HALF YEAR ENDED 31ST MARCH, 1874.

| DISEASE. | OCTOBER. | NOVEMBER. | DECEMBER. | JANUARY. | FEBRUARY. | MARCH. | TOTAL. |
|--------------------------|----------|-----------|----------------|----------------|-----------|--------|--------|
| Dysentery, | 4* | — | — | 1 | — | — | 5 |
| Syncope, | 1 | — | — | — | — | — | 1 |
| Scarlatina, | 1† | — | — | — | — | — | 1 |
| Heart Disease, . . . | 2 | 1 | 1 | — | — | — | 4 |
| Drowned, | 1 | — | — | — | — | — | 1 |
| Caries, | — | 1 | — | — | — | — | 1 |
| Concussion of Brain, . | — | 1‡ | — | 1 | — | — | 2 |
| Diarrhoea, | — | — | 1 | — | — | — | 1 |
| Phthisis Abdominalis, . | — | — | 1 ^f | — | — | — | 1 |
| Aneurism, | — | — | 2 | 1 | 1 | 1 | 5 |
| Enteritis, | — | — | 1 | — | — | — | 1 |
| Hepatitis, | — | — | 1 | — | — | — | 1 |
| Alcoholism, | — | — | 1 | — | — | — | 1 |
| Hepatic Abscess, . . . | — | — | 2 | 1 | — | — | 3 |
| Puerperal Convulsions, . | — | — | — | 1 ^f | — | — | 1 |
| Bright's Disease, . . . | — | — | — | 1 | — | — | 1 |
| Enteric Fever, | — | — | — | 1 | — | — | 1 |
| Abscess of Cerebellum, . | — | — | — | — | — | 1 | 1 |
| Convulsions, | — | — | — | — | — | 1§ | 1 |
| Small-pox, | — | — | — | — | — | 1 | 1 |
| Uncertified, | — | — | — | 4 | 1 | 5 | 10 |
| Total,..... | 9 | 3 | 10 | 11 | 2 | 9 | 44 |

* One case was in an infant 1 month old, and one case in an adult female. † Infant 2½ years old. ‡ On board ship. § Infant 22 months old.

Of the 44 deaths, 41 were males, and 3 were females. The number of deaths among infants under 3 years old was 3. The number of uncertified deaths (nearly one quarter of the whole) is very unsatisfactory, but the Municipal Council has recently issued an instruction to the Sexton which will remedy this defect for the future. Regarding the certificates themselves, it would be well, now that the English Registrar

General has issued a new form which has been approved by the General Medical Council, the Presidents of the Royal Colleges of Physicians and of Surgeons, and the Master of the Apothecaries' Society, to adopt that in lieu of the one provided by the Municipal Council. The new form is as follows, and contains, it will be noticed, no demands for miscellaneous information regarding the deceased which it is almost invariably beyond the power of the medical attendant to give.

MEDICAL CERTIFICATE OF THE CAUSE OF DEATH.

[To be given by the Medical Attendant to the person whose duty it is to give information of the death to the Registrar.]

I hereby certify that I attended.....whose age was stated to be.....; that I last saw h.....on the.....day of.....18.....; that he died*on the.....day of.....18....., at.....; and that to the best of my knowledge and belief the cause of h.....death was as hereunder written:—

| CAUSE OF DEATH. | DURATION OF DISEASE. | | | |
|----------------------|----------------------|---------|-------|--------|
| | Years. | Months. | Days. | Hours. |
| (a) Primary,..... | ... | ... | ... | ... |
| (b) Secondary, | ... | ... | ... | ... |
| (c) | ... | ... | ... | ... |

Witness my hand this.....day of.....18.....

Signature.....

Registered Qualification.....

Residence.....

* Should the medical attendant not feel justified in taking upon himself the responsibility of certifying the *fact* of death, he may here insert the words "*as I am informed.*"

In view of the alarm of cholera during the month of July 1873, the following regulations were some months later promulgated by the Taotai with the consent of the Foreign Consuls. They were published in English, French and Chinese.

SANITARY REGULATIONS FOR THE PORT OF SHANGHAI.

1.—It rests with the Superintendent of Customs and the Consuls to determine the places to be considered *infected*. When any place shall be declared *infected* the Superintendent will notify the Harbour Master, and he the officer in charge at Woosung.

2.—On boarding vessels at Woosung the officer in charge will, if the vessel is from any place declared to be *infected*, hand a copy of these Regulations to the Master, and request him to hoist a yellow flag at the fore, while proceeding towards Shanghai.

3.—On being informed that a vessel is coming up with the yellow flag at the fore, the Harbour Master will send the Health Officer on board.

4.—The Harbour Master will order such vessels to anchor one mile below the lower limit of the Harbour, and will place river police constables to keep watch outside the vessel so as to allow no one to go on board or leave her pending the Health Officer's decision.

5.—If there has been no case of infectious disease during the voyage, the vessel may be admitted to *pratique* at once.

If there has been a case of infectious disease during the voyage, and such diseased person has left the vessel during the voyage, the vessel may be admitted to *pratique* at once.

If there has been a case of death from infectious disease during the voyage, the vessel may be quarantined for one or two days.

If there have been many cases of infectious disease during the voyage, the Health Officer may order the vessel to proceed outside of the Red Buoy at Woosung. Measures may then be taken to remove all *infected* persons, and to purify the vessel and cargo.

But no cargo may be removed and no person may be allowed to leave the ship or to go on board without the sanction of the Health Officer.

In any case the time of quarantine may be extended or continued at the discretion of the Health Officer and the Consul concerned.

6.—The Health Officer will report to the Harbour Master and he to his superiors, and the Consul concerned.

7.—In accordance with Local Rule 17, and Regulation VII. of the Pilotage Regulations, Pilots shall not leave such vessels until authorized to do so by the Harbour Master, and they will request tug boats to "tow ahead" vessels coming into port under their charge with infectious disease on board.

8.—Any person who commits a breach of these Regulations will be dealt with by the Authority to whose jurisdiction he is amenable.

In Shanghai with its complex creek communications, any attempt to shut out a disease by blocking the river alone must prove abortive. Further, unless native vessels are subjected to regulations equally stringent with those imposed on foreign vessels the attempt, even as limited to importation from seawards, must fail. The articles were evidently drawn up without adequate consideration or skilled advice. For example, under the second clause of Article 5, a vessel might be admitted to pratique at once although during, say, a seven days run from Yokohama a patient violently delirious from small-pox should have thrown himself over board, or, to take a less extreme case, had been landed at Nagasaki. No Health Officer has been appointed under the regulations. So much for the regulations themselves. It may be laid down generally that it is only a pretence at quarantine that is possible to a great commercial community, and that such pretence in so far as it tends to inspire false confidence is worse than vain. England has, as is well known, abandoned the attempt to enforce the "detention for periods of sanitary observation of persons who do not already appear sick," which is the definition of quarantine. In this connexion, I think it well to reproduce here the conclusions of the Vienna International Sanitary Conference (1st July to 1st August, 1874). A report in favour of replacing maritime quarantine by the English system of medical inspection was adopted by the representatives of 12 States out of 20. But as 8 States voted against it, regulations not only for medical inspection but also for quarantine had to be drawn up. These conclusions, the result of the mature deliberation of experts for a month, will be useful should it be advisable at any future time to meet a threatened importation of disease into Shanghai.

I. MEASURES TO BE TAKEN OUT OF EUROPE.

With the object of preventing further invasions of cholera in Europe, the Conference approves the measures recommended by the Constantinople Conference (1866), particularly the measures of quarantine suggested in the Red Sea and the Caspian Sea. The organisation of these measures should be of the most complete description, and such as to satisfy the most rigorous principles of hygiene.

II. MEASURES TO BE TAKEN IN EUROPEAN PORTS.

When cholera has invaded Europe, the Conference recommends the subjoined system of medical inspection; but in the case of States which prefer to maintain quarantine, it submits the principles upon which it should be regulated.

(A) *System of Medical Inspection.*

1. There should be established in each port open to commerce a sanitary authority formed of physicians and local representatives, aided by a proper staff. The number of members in each of these different categories will vary according to the importance of the port; but the number should be sufficient to permit of the measures exacted with regard to ships, crews, and passengers being carried out rapidly under all circumstances. The principal officer of the sanitary authority will always be kept informed through official sources of the sanitary state of all ports infected with cholera.

2. Ships arriving from a clean (*net*) port, and which, according to the oath of the captain, have not touched in the course of their voyage at an intermediate suspected port, or communicated directly with a suspected ship, and in which, during the voyage, no actual or suspected case of cholera has occurred, will be admitted to free pratique.

3. Ships arriving from a suspected or infected port, and those coming from unsuspected ports, but which, during the voyage, have had intermediate compromising relations, or on board which suspected cases of, or suspected deaths from, cholera have occurred, will be submitted, on arrival, to a rigorous medical examination, in order to determine the sanitary state of the crew and passengers.

4. If it results from the medical examination, that no case of sickness or the corpse of any person dead from cholera exists on board, the ship, with all it contains, will be admitted to free pratique; unless cases of cholera, or of a suspicious nature, have occurred during the voyage, when the ship, the clothing, and the luggage of the crew and passengers will be submitted first to a thorough disinfection, although both crew and passengers be then free from cholera.

5. If any suspected case of cholera, or death from cholera, be found on board, the sick will be at once removed to a lazaret or to an isolated place provided for the purpose, and the dead will be cast into the sea with the customary precautions, or will be buried after fitting disinfection; the passengers and crew will be thoroughly disinfected, and the ship itself will also be disinfected after the removal of the passengers and such portions of the crew as may not be necessary for the disinfection and charge of the vessel. The clothing and luggage of the sick, and also of the healthy passengers, will be subjected, in special premises and under rigorous control of the sanitary authority, to a thorough disinfection. After this disinfection the property of the passengers and crew will be restored to them, and they will be admitted to free pratique.

6. The merchandise landed will be admitted to free pratique, with the exception of rags and other susceptible objects, which will be subjected to thorough disinfection.

(B) *System of Quarantines.—Arrivals from Infected Ports.*

1. Arrivals from infected ports should be submitted to from one to seven full days' observation, according to circumstances.

2. *Suspected Ships.*—If the sanitary authority is satisfied that no case of cholera or of a suspicious nature has occurred on board during the voyage, the duration of observation should be from three to seven days, dating from the time of the medical inspection. If, however, the voyage has lasted at least seven days, the time of observation may be reduced to twenty-four hours, for the examination and disinfection which may be judged necessary. In cases of this category the quarantine of observation may be completed on board if no case of cholera or any suspicious sickness have occurred, and the hygienic condition of the ship be good. In such cases, unloading of the ship is not necessary.

3. *Infected Ships.*—If any case of cholera or of suspicious sickness has occurred during the voyage, or after arrival, the duration of observation for the healthy should be seven full days, dating from their isolation in a lazaret or other place provided for them. The sick should be landed and subjected to proper treatment in an isolated locality set apart for them, and separated also from the place where the healthy undergo observation. The ship, and all objects in it susceptible of retaining infection, are to be submitted to a thorough disinfection, after which the persons remaining on board will be subjected to seven days' observation.

4. *Arrivals from Suspected Ports.*—Arrivals from suspected ports—that is to say, from ports adjoining and having free communication with a port where cholera exists—should be submitted to observation not exceeding five days in duration, if no suspicious sickness has happened on board.

5. *Various Regulations.*—Ships carrying emigrants and pilgrims, and generally all ships considered peculiarly dangerous to the public health, may, under the conditions previously noted, be subjected to special precautions to be determined by the sanitary authority of the port of arrival.

6. When the local resources do not permit of the measures herein prescribed being carried out, the infected ship should be sent to the nearest lazaret, after having received such aid as she may need.

7. A ship arriving from an infected port, which has put into an intermediate port, and received there free pratique without having performed quarantine, is to be considered and treated as arriving from an infected port.

8. In cases of simple suspicion, measures of disinfection are not strictly requisite, but they may be carried out if the sanitary authority thinks fit.

9. A port in which cholera prevails epidemically should not carry out quarantine properly so called, but should solely have recourse to measures of disinfection.

(C) *Regulations common to the Two Systems.—Medical Inspection and Quarantines.*

1. The captain, the medical officer, and the officers generally should be required to declare to the sanitary authority all that they know with regard to suspicious sickness among the crew and passengers, subject to penalty in the event of a false declaration or of deliberate concealment. It is to be desired that an international agreement should be come to on this subject.

2. The disinfection either of luggage or of ships will be effected in such manner as the competent authorities of each country may determine.

The deliberations upon which the above conclusions are founded, fill a quarto volume of 550 pages. Instead of attempting to summarise them, I would commend to the consideration of the guardians of the public health, the following decisive utterances from the greatest living authority upon hygiene:—

The local conditions which would enable cholera if imported to spread its infection * * are conditions which day by day, in the absence of cholera, create and spread other diseases: diseases which as being never absent * * are in the long run far more destructive than cholera; and the sanitary improvements which would justify a sense of security against any apprehended importation of cholera would, to their extent, though cholera should never reappear * * give amply remunerative results in the prevention of those other diseases. SIMON.—*Memorandum of Advice to the Public.*

As regards cholera, a first and incalculably important question to be answered by those who have to care for the public health of a country, is the question whether by any measures of quarantine, they can provide that all contagion of the disease shall be kept outside the limits of their land.

* * * It may, I think, be accepted as certain that quarantine conducted with extreme rigour, and with the precision of a chemical experiment, will keep cholera out of any port * * in which the extremely difficult conditions can be absolutely fulfilled. * * On the other hand * * a quarantine which is ineffective is a mere irrational derangement of commerce, and a quarantine of the kind which ensures success, is more easily imagined than realised. Only in proportion as a community lives apart from the great highways and emporia of commerce, or is ready and able to treat its commerce as a subordinate political interest, only in such proportion can quarantine be made effectual for protecting it. In proportion as these circumstances are reversed it becomes impossible to reduce to practice the paper-plausibilities of quarantine. * *

* * Quarantine purporting to be effectual cannot rest satisfied with excluding from entry such persons as are obviously sick, but indispensably for its purpose, must also refuse to admit the healthy, till they shall have passed in perfectly non-infectious circumstances, at least as many days of probation as the disease can have days of incubation. * * * Considering what [such restrictions] when really carried into effect, must involve—what inconvenience to persons, what interruption to commerce, and on how vast a scale, and for what indefinite duration of time, no one can expect, in regard of great trading communities, that governments, if they go so far as to enact, will have much success in enforcing quarantine. * * Practically speaking, where great commercial countries are concerned, it can scarcely be dreamt that quarantine-restrictions will be anything better than elaborate illustrations of leakiness. SIMON—*Eighth Report*, pp. 40, 42.

The following cases in private and in hospital (native) practice will, I trust, prove of interest:—

I. *Scarlatina Maligna*.—At 11.30 A.M., on the 26th October, 1873, I was called to see a stout, well nourished male child aged $2\frac{1}{2}$ years who had arrived two or three days before from Chefoo. I had no knowledge of his antecedents, his mother telling me merely that another of her children had died some days previously of “what the doctors had called a bad fever.” On my visit I found that the patient had been violently sick, and had passed two large, fluid and very fetid yellow motions. He had been “perfectly well” in the morning with the exception of a “slight cold,” had eaten a plentiful breakfast of bread and milk, and had been sent out to play in the garden attached to the house where his parents were staying. There had been no convulsion, or twitching of the extremities. He was now (noon) very drowsy and restless so that I could not take his temperature, but his skin though hot was not burning, and there was no eruption beyond a slight redness between the shoulders where a piece of rather rough flannel appeared to have caused a little chafing. There was hardly noticeable tumefaction of both parotid regions, but no tenderness. The tongue was covered with a creamy, yellowish fur, and the fauces were not inflamed nor was there any difficulty experienced in swallowing a spoonful of milk which I had brought for the purpose. I had no suspicion of scarlatina at the time. It was only on account of the very slight swelling in the neck that I looked as well as I could into the child's throat. The pulse was 108, compressible, respiration hurried but regular. I ordered a tepid bath, a diluted sinapism to the chest, and a powder containing $\frac{1}{4}$ grain of quinine with 2 grains of rhubarb to be given immediately and repeated in an hour if vomited. I also directed that a spoonful of wine and water should be given occasionally to allay thirst. At 3 P.M. the condition was but little changed, the powder had been retained and some milk, as well as the wine and water had been swallowed. The pulse had however gone up to 120, the face was pale, and the feet cold. Hot flannels were ordered, and as much wine and water as he would take. At 6 P.M., the pulse was 156, without other change in

the symptoms except that the breathing was shallow, and somewhat though very slightly irregular, the irregularity being intermittent and only observable upon counting the respirations through at least consecutive half minutes. I was now given more accurate particulars regarding the infant that had previously died, and no doubt as to that having suffered from scarlatina remained on my mind. The presumption therefore was that this child was also suffering from the same disease. There was now no complaint of thirst, but milk when offered was swallowed. I ordered a warm bath into which a tablespoonful of mustard was stirred. Still there was no sign of eruption. At 2 A.M. on the 27th I was summoned, and then found the child obviously dying—comatose, with a faint mottling on the inside of the thighs, the skin of the rest of the body except perhaps of the back, which I did not examine, being natural in appearance. General convulsions had occurred at 1.45 A.M. The pulse was imperceptible. Death occurred at 2.30 A.M., and ten minutes after death, the entire body was of a mulberry tint. There was no post-mortem. The case of the first child, who died at Chefoo, is detailed by Drs. CARMICHAEL and MYERS at page 20.

Although in the absence of thermometrical readings, the mere sensation of heat conveyed by the skin to the hand is a very unsafe guide, I do not think that hyperpyrexia was here the immediate cause of death. Nor does it seem that "malignancy" in the sense of a typhoid character imparted to the disease can account for the rapid course. It was a case, I apprehend, of specific poisoning of the nervous centres producing a syncopic form of the disease, the materies morbi falling chiefly upon the ganglia which preside over the actions of the heart and lungs.

II.—An obscure and interesting case occurred in my practice in February last. A gentleman aged about 30, of markedly abstemious habits and in good general health, without any history of rheumatism or syphilis, consulted me one evening under the following circumstances. He had felt "seedy" on getting up, but the feeling of malaise had passed off during the day. Appetite, however, was abolished, and as the afternoon progressed a nameless feeling of oppression and of impending evil had come upon him. An hour before he came to me, while talking to some one, he found that though knowing perfectly what he wanted to say, and also what he was saying, he was nevertheless talking nonsense, not only putting in unsuitable words in sentences of the form he required, but uttering entire short sentences quite beside the mark. He had laid himself down on a sofa for some time in hope of getting over the attack, but without any benefit. It took him fully fifteen minutes to give me this description, and in the course of it he made many verbal mistakes. He walked steadily across the room, while looking at the ground, but with noticeable uncertainty while looking at an assigned point on the wall opposite him. His grasp was as good on one side as on the other, but he could read only with one eye covered, which eye was immaterial. He thus read a short paragraph from a book with perfect correctness, though in rather an agitated manner, but this I ascribed to his anxiety about his condition. Immediately afterwards he told me that he could not tell what the paragraph was about. The action of his heart was regular, but there was a systolic whiffing murmur at the base, audible as far as the nipple. I could discover no trace of valvular disease to account for the disengagement of an embolus. As he was evidently below par I gave him a claretglass of sherry with two or three grains of quinine to drink on the spot. In the course of half an hour he declared himself much better, and a week afterwards, when I saw him next, he declared himself quite well, there had been no recurrence of the head symptoms, and the cardiac murmur had almost disappeared. He had in the interval put himself upon a regular course of malt liquor.

It was not easy to determine the exact pathological condition corresponding to the symptoms described. I have lately accidentally found what I conceive to be the key to it in an incidental remark in one of BASTIAN'S lectures on common forms of paralysis from brain disease, to the following effect (I quote from memory), that commencing thrombosis of the cerebral vessels may be due to lagging white blood corpuscles under certain tissue conditions and when the blood is moving sluggishly. A stoppage so produced in a minute vessel may spread to larger trunks, while stimulants will cut it short. It is, I think, evident from even this one case that a rigid abstinence from stimulants in men of lax fibre and who work hard is strenuously to be deprecated. This applies in an especial manner when the weather is cold and damp. Under such conditions tissue metamorphosis is accelerated, and when we imbibe a fluid which lowers that consumption we apply a kind of moderator to the furnace (BINZ in *Journal of Anatomy*

and *Physiology*, viii. 240). When the weather is hot on the contrary our tissue metamorphosis is of itself sluggish. If we then continue to consume the same amount of alcohol we artificially increase this inertness which can only result in an accumulation of partially transformed products within our organism. But in cases where the heart acts feebly either from natural constitution or from disease, alcohol revives the circulation. The moral of course is that it is only by an abuse of terms that "total abstinence" can be qualified as "temperance."

III. *Wood's Radical Cure of Inguinal Hernia*.—A Chinese servant on board one of the Customs cruisers, aged 25, had suffered from an oblique inguinal rupture on the right side for as long as he could remember. It was small, and usually easily reducible, but on one occasion lately while at sea much difficulty was experienced in returning it. The patient's master at last fortunately succeeded, after having kept him for several hours in a hot bath, at the same time administering laudanum freely. As he was anxious to retain his situation yet feared that some day he would die of strangulation of the tumour, he determined to seek operation. He was accordingly admitted to the Gutzlaff Hospital under my care. On the following day, the bowels having been cleared by a purgative enema, and chloroform having been administered, I performed Wood's operation by wire as described in his work (*On Rupture*, pp. 109-113), Dr. James JOHNSTON kindly giving me his valuable assistance. The canal was large, admitting two fingers with ease. Immediately after the operation the external ring was found to be firmly closed, the cord however being quite moveable behind the lower twist of wire. A grain of opium was given at once, and repeated at night. On the 3rd day there was slight belly tenderness, relieved by removal of the spica bandage, and the application of hot fomentations. Milk, eggs and beef tea ordered. On the 4th day 2 drachms of castor oil was given, followed immediately on its operation by 1 grain of solid opium. The right testicle was much swollen, and the scrotal wound was discharging a small quantity of thin pus. On the 5th day the pad being soaked with pus had to be replaced by another slipped carefully under the loop of wire. The discharge continued until the 9th day when I untwisted the wire. On the 11th day I removed the wire, having previously been obliged to cut it. Two days later, both wounds were rapidly healing, and the canal was filled with perfectly solid tissue. On the 16th day going suddenly into the ward I found the patient walking about, which of course he had been specially warned not to do. Convalescence went on without interruption. On the 28th day a Mocmain truss was applied, and on the 32nd day the patient was discharged with a canal quite impervious, and no impulse on coughing. I should mention that to guard against risks he had been kept all through in a separate ward.

Three months and a half after the operation, Dr. CARMICHAEL of Chefoo was good enough to let me know the man's condition, his steamer having meanwhile gone to that port. There was then no impulse on coughing, but the man was very careless. Three months later he was discharged from the ship on account of continual misconduct, but up to that time, seven months after the operation, there had been no return of the protrusion, although he had not only performed all his duties as usual, but had indulged in several sprees and had been concerned in many rows.

IV. *Amputation above ankle. Esmarch's Bandage*.—A Chinawoman, aged 55, entered the Gutzlaff Hospital with total disorganisation of the bones of the right foot. The skin was riddled with sinuses leading down in every direction to diseased bone. The foot was enormously swollen, and was discharging so profusely that the patient's health was rapidly giving way. For more than a year she had been confined to bed.

On the day but one after her admission Dr. LITTLE having applied ESMARCH'S apparatus while chloroform was being administered, I amputated above the ankle by an antero-external flap raised by dissection, and a postero-internal flap made by a direct cut down to the bones through all the tissues. Not a drop of blood escaped. A very little serous fluid followed the knife, but ESMARCH'S own description of the appearances presented was fully borne out:—"It is altogether as though one were operating on the dead subject." The bones were rosy on section, but no blood escaped from them. The anterior and posterior tibial, and peroneal arteries were tied, and the elastic ligature was removed. The face of the stump was immediately bedewed with blood, but there was even less than the ordinary oozing. Next day agonising pain was complained of, and there was constant twitching of the anterior flap visible through the dressing of oiled lint covered with a light bandage. On the 6th day there was considerable swelling of the stump with heat and pain. A pink blush was visible along the course of the lymphatics, and elsewhere in patches. A calomel purge was administered and a cloth soaked in warm laudanum was applied to the leg. Next day pain had disappeared, there was about $\frac{1}{2}$ drachm of healthy pus on the dressing, the entire wound except the ligature track healing by first intention. The three ligatures came away on the 10th, 16th and 19th days respectively, and on the 20th day the patient began to move about with a crutch. A month later she left the hospital wearing a wooden leg with perfect comfort.

Recovery was in this case more rapid than could have been expected, and none of the evils, such as secondary hæmorrhage, &c., said occasionally to follow the use of ESMARCH'S bandage, occurred. Fracture of the femur by muscular action is so uncommon that I record the following instance:—

V. *Fracture of the Femur from Muscular Action.*—A male Chinese servant, aged 23, going out of a room without looking where he was going, was lightly struck on the breast with the end of a bamboo, upon which two buckets of water were being brought in by a coolie. So light was the stroke that not a drop of water was spilled from the buckets, which were about three parts full. He started back, fell flat on the ground with a scream, and was unable to rise. On examination I found the left femur transversely fractured at the junction of the upper and middle thirds.

An attempt to maintain extension with a long splint and a weight proving abortive, as in my experience it always does with Chinese, the limb was put up two days later on a double inclined plane. At the end of a month the latter was replaced by the Bavarian apparatus described by Assistant Surgeon MOFFITT in the Appendix to the *Army Medical Report* for 1869, p. 517. This was allowed to remain for six weeks. On its removal, a simple roller bandage was applied, and the patient was discharged in 3½ months with very slight external angular displacement, and shortening to the extent of half an inch.

In my next report I will record several other cases of interest or importance which have occurred in my own practice. Meanwhile I would remind other practitioners in Shanghai and at the outports that it will be to the common advantage if they will contribute any instances of rare or obscure disease which may come within the field of their observation.



